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# COLMAN'S



Established 1848.

ST. LOUIS, THURSDAY, AUGUST 9, 1883.

No. 32. Vol. XXXVIII.

## Sorgo Department.

Our Future Sugar.

BY PROF. W. O. AYERS.

"Some sugar, Mr. Dana, if you please." It was the elder Prof. Silliman who spoke; the present distinguished professor of geology and mineralogy in Yale was the one addressed, and there was I, a vicescent sophomore, where I had no business to be, having amugged myself in to hear (to my great delight) a lecture on chemistry. The sugar was brought, it was dropped on the glowing plate of iron. "I use the sugar only as a combustible; it at once takes fire, as you see." That was the greater part of half a hundred years ago; it is astonishing how every now and then small events remain fixed in the memory: I can hear the tone and the accent at this moment; I can see the iron plate, and the fact has from that day to this been a settled thing in my mind that sugar is a combustible. That term conveys to us in general language the idea of something to be burned, and the question naturally arises. How is it that we make out to burn up every year so many millions of pounds of sugar as are imported into this country in addition to the great amounts made within our own limits. Here comes in a point of practical physiology; the relation which food bears to combustion. In this lies the whole bearing of the importance of sugar, the necessity for its use, and the resulting extent to which that use prevails. Our bodies are solid; they have bulk and weight, that is to say they are composed of tissues. These tissues are in constant process of change, and to supply the materials for such change is one reason why we take food. But fully as important as that our bodies have bulk and weight, is the other fact that they have a certain degree of heat which is absolutely essential to their existence. To afford the materials for this heat is the second reason why we take food. But the food which performs one of these duties does not attend to the other. The builders are not the heaters, and so we never take our food in simple and single elements. It is always of mixed materials. Fatty oily substances are combustibles, and so are things which are sweet. That which is sweet, in a greater or less degree, is to the great majority of people pleasant in taste, and following this guide we sweeten the articles which we eat in an endless variety of ways.

The result is that sugar becomes one of the necessities of life, and the realization of this is shown by the fact that, in addition to the great amounts which we produce within our own limits, we annually import from foreign countries more than fifteen hundred millions of pounds. Such a trade as this is of course a matter of great national importance. These importations show about \$70,000,000 paid out from our resources for the benefit of producers in other lands. If now, in place of this immense drain of money we can retain it, to the advantage of our own agricultural population, we certainly shall, by so doing, make a decided step forward in the line of strength and independence. Admitting that sugar is one of those things without which we cannot exist and prosper either as individuals or as a people, if we can produce our own supply, we not only save and retain within our own control the money which the sugar represents, but we by the same act, render ourselves independent of supplies in a matter of vital import. Any event, or train of events, which should cut us off from access to our sources of foreign sugar supply, and such contingency is at the least possible, would produce widespread suffering of no trifling degree. Can we render ourselves as a nation perfectly free from such risk, perfectly self-supplying? That is to say, can we stop the importation of sugar, absolutely, because we have no need of importation, because our domestic production of the article satisfies the full need of the country? You may say that it is absurd to think of such a thing; that he must be a mere visionary dreamer who will entertain such an idea, and that it can only be counted among the fancies of one who has barely a superficial knowledge of the subject. It is truly a work of immense magnitude and difficulty, but that is no proof that it cannot be accomplished. We have but to consider whether we have the means within our reach, and the ability to use those means. For my own part I believe that we have, and that, instead of producing as we do now, say 195,000,000 pounds of sugar, and importing the remaining huge amount which we consume, we may just as readily produce, and in justice to ourselves ought to produce 2,000,000,000 of pounds, and as much more in fact as we require in the future. Do not think I am talking wildly. Read on patiently and see for yourself. Our acres are broad enough, our strength is great enough, and when a vigorous people like ours have fairly got their shoulder under the wheel it will come up out of the mud of dependence on any foreign supply.

To look at the subject with proper intelligence, it is necessary for us to understand what we mean by sugar, and hence it is obtained. We restrict ourselves to one type only. Two main classes are recognized in chemical works, grape sugar and cane sugar; grape sugar being the characteristic product of various fruits, and cane sugar being contain-

ed in the juices of many plants, prominent among which are different grasses commonly called canes. Grape sugar we set aside, for it is not an article of commerce except as a result of chemical action. Vast amounts of it are sold, having been formed artificially by the action of acids on starch. It is not, however, in the form of sugar, and is not classed as sugar. Most of it is classed under the name of glucose, a thick smooth syrup, though some of it is brought solid, and granulated.

It is well here to remark that an unreasonable prejudice exists in the minds of many, in respect to glucose, under the belief that it is injurious to health, and is in fact a poisonous article. This is entirely without foundation. Glucose is a harmless and wholesome article. It has, however, less sweetening power than cane sugar, (reckoned by some as three to five,) and of course therefore is that much deficient in saccharine properties. It is used largely in making candies, syrups, etc., and no injury can arise from such use.

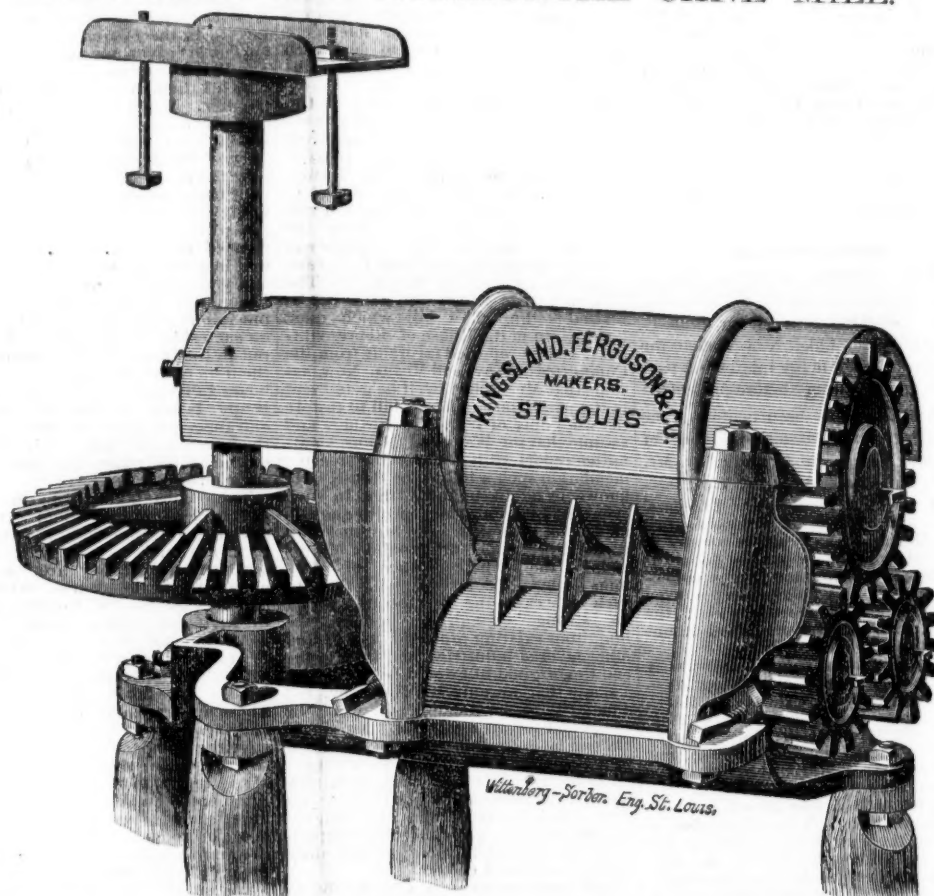
Disregarding, therefore, grape sugar, we have three forms of cane sugar which are well known in this country, maple sugar, beet sugar, and sugar. Maple sugar is American, out and out, and not very many persons are fully aware how largely it is manufactured. Produced mainly in our northern and northeastern States, the annual yield is at least forty millions of pounds, but it is never sold except by its full name. Beet sugar we can scarcely claim. Various attempts have been made in this country to introduce the manufacture, but commercially they have not been successful. The reasons of the failure we cannot discuss at present; perhaps at another time we may consider them. But when we see sugar mentioned, when we buy sugar, one thing only is practically intended; it is always the product of the sugar cane, and nothing else. This is what we are now to follow out, and to see if we cannot supplement it by adding that which we can extract from another cane, or from various other canes, thus enlarging our area of production, and increasing our limits of result to almost any extent which the demand may require.

Probably no one needs to be told that the sugar cane is a plant of hot climates. It is true that it is not strictly tropical in its growth; it is not absolutely confined to those countries where frost is unknown. If so, we should, in the United States, be practically excluded from its culture. A very small part of the peninsula of Florida, and the extreme border of Texas would make our limit, and that too small to make a supply worth counting. Whereas now it is safe to calculate that very nearly 200,000,000 pounds can be depended on as our internal product, and though this is small in comparison with the 1,500,000,000 which we import, still it is one of the sources of our national wealth of no mean account. All of this is of course produced in the Gulf States, and the great bulk of it in truth comes from Louisiana. The sugar cane bears a certain amount of frost with impunity, but it requires such a long continuance of heat to fully develop the saccharine value of its juice, that in regions within the frost limit the crop is liable to be badly injured or totally destroyed in perhaps a single night. Its cultivation becomes precarious, and it is neglected for other crops not liable to be thus affected. This being the case, it was very natural that efforts should be made to discover other sources of sugar; to look for plants which, though they did not take the place of sugar cane, might, we became, as it were, substitutes for it in regions where the cane could never grow, or at least could never perfect its juice. It was also very natural to study botanical affinities, and to take for special investigation plants somewhat closely allied in structure to sugar cane itself, that is, the family of the grasses. It was well known that the juice of many of them was sweet to the taste, our common Indian corn being a familiar example. Years and years ago sirup was made from the juice of cornstalks and used by the families of farmers, but this led to no practical results. As long ago as the colonial times, several forms of long grasses, probably not distinct species, but only varieties from cultivation, were introduced into this country, some in the South and one at least in the North, but without any reference to the nature of their juice. They were known under the names of Dura—or Dourra—Guinea corn, chocolate corn, broom corn, etc. Though described formerly by botanists under different titles, they all belong to a single tribe, the Andropogonaceae, to a single genus, *sorghum*, and now the most distinguished authorities say that they are but a single species, *sorghum vulgare*. This species is most wonderfully plastic, most remarkably susceptible to the moulding influences of cultivation. Not only its look and its mode of growth are modified, but its internal qualities are strikingly changed; some forms are very rich in sugar, some are almost entirely destitute of it, and it is only of the sweet varieties that we have occasion here to speak.

[TO BE CONTINUED.]

All the mill and evaporator factories are running night and day, and those who accepted and acted upon our advice of two months ago may get their machinery, but we have fears for those who have not already ordered. For a good evaporator address Mathers and Jenkins, Muncie, Indiana.

## THE ORIGINAL HORIZONTAL CANE MILL.



We take pleasure in calling attention to this, the ORIGINAL HORIZONTAL CANE MILL, which has been in use a number of years, and to which such improvements as are necessary have been added from time to time, until now it is the most perfect Machine in the market. Experience in the use of Cane Mills teaches that the HORIZONTAL plan of construction is far superior to the upright. With this plan the manufacturers are enabled to use gearing on the rollers in such a shape as to make them revolve three times as fast as the horse walks, thus increasing the quantity of the work very materially. In feeding, the tendency of the Upright Mills is for the cane to crowd down, and often a bunch at the bottom is crushed, and the upper stalks go through without having had the juice extracted. A glance at the cut will satisfy any one that this cannot be the case with this Mill; it is all crushed alike and as dry as you wish it. The shield on the field side protects the gearing, and the division bar causes a regular and even feed, and prevents liability of breakage from the stalks crowding down on the side of the rollers. The rollers are cast iron, flanged, having wrought iron shafts; the boxes are adjustable with set screws, and are separated from the rollers by solid plates; hence the oil cannot get mixed with the juice. This Mill is simple and durable; the very best and cheapest in the market, considering its good qualities. There are four sizes made.

Write for Descriptive Circular to

KINGSLAND & FERGUSON MANUFACTURING CO., 823 North Second Street, St. Louis, Mo.

### About Glucose.

EDITOR RURAL WORLD: There are some things appearing in print that look remarkably strange to me, and no doubt look the same to others—one of these I will mention. You will see in the little paper called the *Defecator*, printed in the month of July, 1883, a piece headed "Glucose or Grape Sugar;" you will see in it what Mr. Peter T. Austen, a chemical expert and professor of analytical and applied chemistry in the New Jersey State Scientific School, says in regard to glucose:

He says it is pure and wholesome and that the most searching chemical analysis can discover no trace of the acid or any harmful impurities, and if this industry is encouraged, etc., that the day is not distant when corn will be the chief source of supply to the world of not only a cheap but most wholesome sugar.

Now we have been taught not only by the RURAL WORLD, my pet paper, but by numerous other prints that glucose as manufactured was not only unhealthy, but even poisonous, and that people should avoid the use of the same, and by its use in the adulteration of cane sugar and cane sirups people were being misled by the RURAL WORLD and its supporters, i. e., those that advertise having machinery to sell, or else we all have been laboring under a great mistake. Now far as my experience goes I can produce actual figures that will prove that the northern cane industry is remunerative, far more so than any farm crop when conducted on the right plan. As regards the making of sugar from northern cane, I cannot see what the great cry is about the sulphur fumes, vacuum patent steam evaporators and more or less patent appliances, as I have taken pains to obtain sirup and sugar from

these 40-horse manufacturers, and sirup of my own make on an open pan or Cook Evaporator comes fully up to the best of them. I have sirup that has 9 lbs out of 11 gone to hard crystallized sugar and I have sugar that will take its rank along side of that that retails in this market at 8 1/2 and nine cents per pound. I consider one hundred gallons of Amber cane sirup good for nine hundred pounds of sugar, worth in the market here at home 8 cents per pound, or \$72. Cane stands here from 8 inches to 2 feet high. There will not be as much this fall as last, on account of wet weather, as it has rained every week for three months. Those that have brought cane through will get well paid.

B. M. O.

Osborne, Mo.

REMARKS.—There has been so far no sugar made out of corn in the full sense of this word. The grape sugar manufactured has been sold only to confectioners, vinegar manufacturers and for similar purposes, and is a substance having an appearance like common soap. This article has been lately dried very hard, and after being made into a solid mass is so manipulated by machinery as to give it the appearance of granulated sugar. With this some dealers and manufacturers have adulterated cane sugar and put it to the jobbing trade under the name of new process sugar, but it has not sustained itself in the market and is rapidly giving way. A simple method of testing sugar to discover this compound is to take the top of an ordinary tin can, in it place the sample of sugar, or what purports to be sugar, and hold it over the light of a lamp or the gentle heat of a fire, without melting the sugar; in the case of pure sugar the water will evaporate and the clean granulated sugar only will remain, but in the case of the compound the grape sugar will form a mush or semi-liquid mass.

The glucose, pure and simple then, has not necessarily any impure or unhealthy properties; that is, if all the acid used to convert the starch into grape sugar, has been carefully neutralized. This article has been used to adulterate table sirups to a great extent, and its sale depends entirely upon the price; thus, when Belcher's pure cane sirup sells for 40c per gallon, this glucose compound sells for 30c, hence the demand. But it is a mistake to suppose it injurious to the health. The difficulty is that it contains only about 30 per cent. of the sweetness of cane sirup, hence those who buy it are simply cheated by the color and appearance.

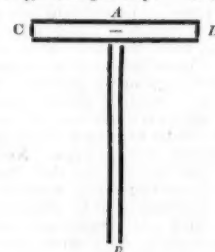
What is Porous Alum and where can I get it? Our druggists do not know what it is and do not keep it. B. M. OVID. It may be had of any good druggist. A. J. Child & Co., 208 Market street, St. Louis, can get it, or indeed anything else for you.

### Sweep vs. Skimmer.

EDITOR RURAL WORLD: A good clarification requires the removal of all the scum that raises immediately, giving it no chance to boil under. When the skimmer is used, as it is put under the scum, it carries some of the scum with it into the juice, and when it is raised up the drops fall and hit the surface where there is more scum driving it into the juice, thus mixing the scum and juice at every motion of the skimmer. Not only so, but the thin scum always has, and always will, run through the skimmer, thus defeating the object aimed at, and allowing it a chance to boil under. Mark the contrast, when we put the sweep against the scum, and move it over the surface leaving no scum behind it, and absolutely making no mixture of the scum and juice. It is done quicker, better, and easier than with a skimmer. The scum is drawn over the edge of the pan, and drops down into the trough, and runs into the bucket ready to be disposed of in a proper manner.

A few motions of the sweep will remove all the scum from the surface of the batch. More scum will continue to rise as the evaporation proceeds, growing lighter in color until it is a cream white at last. Then we consider the clarification complete as far as it can be done without chemicals. When the scum becomes yellow, the fire should be raised so that the ebullition will cover the whole of the surface of the pan, the ebullition rising in the middle carries the thin scum with it on to the cooling sides, where it subsides, leaving the scum that would run through the skimmer, on the almost level sides to be taken off by the sweep at your leisure, thus securing a clarification better, quicker and easier than with a skimmer. We would recommend that as long as the scum is decidedly green, and raises fast, not to allow the ebullition to cover the whole of the surface of the batch, but leave some 6 or 8 inches where the scum can accumulate undisturbed when it can all be taken off at one motion of the sweep. Of course it will be necessary to have a suitable pan like the Railroad pan to use the sweep on. The R. R. pan is 9 feet long, having one partition 4 feet long, bottom sheet iron 30 inches broad, 27 inches inside measure, sides 1 1/2 x 18 inches oak, ends 2 x 7 inches deep, sides flaring so as to be only 7 inches deep. Batch 4 inches deep, holding between 30 and 32 gallons. A strip of thin

hoop iron 1 1/2 inches broad is nailed on the outer edge of the sides, extending 1 1/2 inch below the side to guide the scum into the trough, and prevent it from running down on the under side of the pan. Parallel with the side of the pan and 4 inches from it stands the fender, made of a plank as long as the pan, 4 inches wide, 3/4 inches thick, standing on its edge, 1 inch below the upper edge of the pan, directly over the trough, to conduct the scum into the trough, and protect the man who skims from being daubed with scum. You see no scum except on the pan, in the trough and in the bucket, it can be kept as neat and tidy as a parlor. But with a skimmer you are daubed unavoidably very often, making more labor and not doing the work as well. One man without assistance can make 60 gallons without any hurry in one day. In my opinion it is superior as a defecator to any pan that uses a skimmer. The batch makes 3 1/2 gallons of sirup; when the arch is hot it boils in 8 minutes, it is finished in 50 minutes. Making 17 batches in 14 hours equals 60 gallons per day. Description



of the sweep: A. B. handle, 2 feet 10 inches long, 1-2 inch thick, 2 inches wide at one end, 11-2 inches wide at the other. C. D. blade, 2 feet 5 inches long, 3 inches wide, 1-2 inch thick, with a mortice on the center of one side to receive the large end of the handle at right angles with the blade. R. J. Tycoon, Ohio, July 28th, 1883.

### Wants a Bagasse Burner.

EDITOR RURAL WORLD: I have been in the manufacture of cane sirup for six seasons, and have become quite interested in my business; more so since reading your valuable paper for the past six months, in which I read many valuable suggestions, which if obeyed, are of great worth to the cane growers as well as to the manufacturer. I have had the pleasure of making a good article of sirup so far, and have averaged about two thousand gallons per season. I use a 15 foot pan, in four parts, equally divided; last pan next to flue is my finishing pan. Here I "dip off" with a flat scoop and run through pine troughs a distance of fifteen feet which gives the sirup a chance to cool some before entering the cooler. My price is 20 cents per gallon or two-fifths of sirup for the making. We average about 50 gallons sirup per day, with three hands and a pair of horses. One cord oak wood will boil about 100 gallons of sirup.

I would like to rig up this fall to use the pressed stalks as fuel. Can you give me the needed information soon? I see others have asked for the same in your good paper. Heretofore I have been using the bagasse for manure by using lime with it, and have been well paid, but perhaps I could use it to better advantage as fuel. The growing crop promises well for a good yield; more being planted than any previous season to my knowledge. I have four acres planted from which I expect to harvest 150 gallons per acre. Early Amber is our best, making a fine sirup. Early Orange did not come up well for us this season. I will enlarge my manufactory as the business advances, which I have no doubt it will for a long time to come; will also endeavor to find the number acres planted, and average yield in our county, and report same to you soon as convenient. Your friend and well-wisher, FRANK D. W. Medway, Ohio, July 23, 1883.

In answer to the numerous enquiries as to the right size of the barrel for sirup, the kind of wood, the price, and where they can be procured, we would say: The best wood is cypress. They hold from 47 to 50 gallons and can be purchased for about one dollar and sixty cents each. If a large number is required it would be best to order them knocked down, when about 350 make a car load. Any ordinary cooper can put them together. For further information enquire of A. J. Child, Market street St. Louis.

STARCH FROM SUGAR.—Every one knows nowadays that we can make sugar (one kind at least) out of starch, but as yet we are no more able to reverse the operation than we are to combine carbonic acid with water or alcohol to make sugar. Bohm's experiments go to show that in the plant both operations take place, viz., making sugar from carbonic acid and the conversion of this sugar into starch, the chlorophyll granules being the agent that aids in this change under sunlight.



## The Shepherd.

### They All Say the Same.

Our card in the RURAL WORLD has been the means of selling for us quite a number of sheep, and we consider it one of the best advertising mediums we have.

R. T. McCULLY & BRO.  
Proprietors Lee's Summit Merino Sheep Farm, Lee's Summit, Mo.

### Sheep Dying.

COL. COLMAN: Randall's Practical Shepherd received, but do not see anything in it that corresponds with the symptoms of the disease my sheep are dying of. They are still dying, 2 to 4 each day; will drop for a few hours and die without any apparent pain. Nearly all come up to the pen when taken, so I know pretty well how long sheep are sick. I suppose they are feeling sick several hours, say 5 or 6, before they leave the flock. Any way, they do not live more than six hours after coming back to the pen. We have no veterinary surgeon here, or I would have had them examined long ago. I, this morning, moved them three miles into entirely new range to see if it would help them any.

Enclosed find 50 cts. in stamps, balance due on book. Yours truly,

Oo-wa-lu, I. T., July 30, 1883.

REMARKS: From your brief description we are unable to determine the disease that is carrying off your sheep, but it is more than likely to be intestinal parasites, or worms in the lungs. For the former an experienced shepherd recommends raw linseed oil one part, turpentine one part; give a tablespoonful at a dose, for three days, then repeat in three days, and so on until symptoms change. Guard against constipation and let the food be nutritious.

If worms in the lungs, the fumes of burning sulphur is recommended as the best treatment. The affected sheep should be put in a close building and a pinch or two of flowers of sulphur burned on a piece of paper laid on an iron shovel, the sulphur being added pinch by pinch, until the air is saturated as far as can be breathed without violent irritation or coughing; a person should remain in the building with the sheep, and thereby avoid the risk of an overdose. This should be kept up for half an hour, and repeated once a week. Nourishing food should be given in this case also, and the following tonic mixture: equal parts of sulphate of iron, ginger, gentian and common salt. Say about one teaspoonful to each sheep once a day.

### Sheep in Kansas.

COL. COLMAN: I notice in the RURAL WORLD two very readable articles about sheep and wool in Kansas. The communication of J. E. B., from Reno county, is especially interesting from my having spent six weeks there last August and September, during which time I had my eyes and ears open to everything pertaining to the sheep and wool business in that region.

Who J. E. B. may be I cannot say, but he is certainly the first man I have heard of who was satisfied with recent experience in that region.

Everybody seemed to be anxious to sell and get out of the business, but the difficulty seemed to be to sell at all, or at any price that would let the owners out at cost.

Many sheep were out on shares (one-half the wool and one-half the increase). A friend had two hundred and fifty out; this spring's report showed a loss of one hundred—\$46 worth of wool, three hundred and one head lambs in all, and he is trying to find a buyer at \$700.00 for the lot.

Last winter's fat sheep were marketed at a decided loss. I visited a flock of 12,000 belonging to an Ohio man; asking him how the business paid, the reply was, "We had a bad time with scab, and didn't make anything."

Three or four pounds of wool at 15 to 17c don't make money very fast, and wild feed don't make mutton for market in the spring, and corn at 75c a bushel will soon eat up all the wool.

Grazing sheep on winter wheat seemed to be generally a good thing, but not always.

That region is in the mixed range and farming district, and is being rapidly fenced up. It takes double to fence against sheep that it does to fence against horses or cattle. The alkali in the soil keeps up a continual smothering when sheep are grazing, and the tendency of wild feed alone is to very light fleeces.

There is an impression abroad that there is much money in sheep in Kansas, but thousands moved from there to Missouri last year, and any one looking for a good sheep locality will do well to go slow and look sharp so far as Kansas is concerned.

The business there as here is just now particularly sick for various reasons, which at some future time with your permission I may take time to notice.

E. B. M.  
Adair Co., Mo., July 31, 1883.

SUCCESS WITH SHEEP.—Cassius M. Clay, of Kentucky, is well known as a successful farmer and writer. He says: "Sheep that graze will feed at regular hours night and day; and only lie by when the weather or the fly hinders them. They go over the same grass nearly each time, take salt and water, and then lie down on the same ground. Hence the necessity of changing them to break up their place of rest. A new flock coming in will select a new place for lying down. In grazing they form a line most advanced in the center, that space being held by the leaders who direct the movements. This does very well when the space is wide enough for both flanks, but in defiles or other obstructions the weaker sheep follow behind the leaders, and get poor fare, and, consequently, are puny, and often diseased, for want of sufficient variety and choice of bite. Hence in close districts sheep must be kept in limited numbers, or else the whole thing will fail; and I have known many farmers who tried a 'sheep farm' to quit it in disgust forever, and yet I say it 'pays' when judiciously managed better than any other.

### R. T. McCully & Bro's Sales.

ED. RURAL WORLD: With this we hand you remittance for our advertising bill, and with it have to say that our card in the RURAL WORLD has been the means of selling quite a number of sheep for us. We consider it one of the best advertising mediums we have. We hand you report of our sales since April 1st, last:

1 ram and ewe to H. Henry, Little Rock, Ark.	\$ 50
4 ewes to C. V. Criss, Belton, Mo.	80
100 rams to G. Weist, Gainesville, Texas.	1700
21 rams to A. Branshaw, Abilene, Texas.	840
4 rams to H. C. Beeder, Burton, Kansas.	200
1 ram to T. W. Miller, Wakeeney, Kansas.	50
1 ram to B. Wright, Belton, Mo.	40
11 rams to E. G. Dewey, Grenola, Kansas.	450
Wool sold June 15th.	1020
Total.	\$4436

We have 200 of our best rams left, that will average \$40 per head when sold, also 200 breeding ewes and lambs. How is that for a farm of 160 acres! Certainly it pays to handle Merino sheep of the best strains and registered. We have the finest show of sheep for the fair this fall we have ever had; were offered \$200 for our ram lamb, Model, and refused it. He is the finest show lamb of his age we have ever seen and if we don't miss our guess he will make many a good lamb. Wish he was at home before the fair is all over. Hoping to meet you at the fall fair.

R. T. McCULLY & BRO.  
Lee's Summit, Mo.

### Merinos for Australia.

We have heretofore made mention of the late shipment of sheep to Australia, but the following letter from John P. Ray, of Hemlock Lake, New York, to the Rural Home, gives many interesting particulars and details not before presented:

Brief allusion has been made by the daily press to the recent shipment of American Merinos to Australia by Mr. Wm. G. Markham, Avon, N. Y., President of the New York Sheep Breeders' Association. This event is looked upon by the Merino breeders of the country as worthy of more than a passing notice, as it consists of a better and larger collection of prime No. 1 Rams, selected from the best and most noted flocks of the country, than was ever combined in one shipment made to any point.

It is a fact well known, and universally acknowledged among our sheep men, that the unwearied efforts of Mr. Markham at home and abroad, have done more to call the attention of foreign flockmasters to the great excellence of our prime American Merinos, which have been bred pure from Spanish importation made prior to 1812, than all other influences combined. This enterprise is worthy of the man and the industry involved, and although this is the fifth shipment of sheep made to that quarter by Mr. Markham within three years, it is still looked upon as a great experiment, as the previous shipments have been made to a very few breeders, who are well pleased with the results; yet if such enterprises are to prove a success in the future, the excellence of our sheep must be generally conceded by Australian breeders, hence the great importance of wise and judicious selection.

Having seen many of these sheep, and being well acquainted with the lines of blood and course of breeding pursued in the flocks from which they were secured almost regardless of expense, I predict, barring all accidents, a satisfactory outcome. These sheep went out in charge of Ernest Townsend, son of Hon. E. Townsend, Pavilion Center, N. Y., whose thorough training in the management of sheep peculiarly fits him for the responsible position. He will be joined at San Francisco by Hon. A. M. Garland, member of the late Tariff Commission, and President of the National Wool Growers' Association.

If I am correctly informed in reference to the type of sheep which compose these great Australian flocks, there can be but one result from breeding to these few breeders, viz., heavy, oiled, and well covered rams, viz., wonderfully increased wool-bearing capacity in the progeny. To sustain this view I have only to refer to the scouring records, made under the auspices of the State and Ontario and Livingston Association:—"The Nobles Ram," of 9 lbs. 3 oz.; "The Gilbert Ram," a few ewes, both sons of "Tiger Sweepstakes;" "Dixie," 9 lbs. 2-1/2 oz., son of the Losie Ram; "Wooley," 9 lbs. 7-1/2 oz., by "Just Right," son of "All Right;" and many others that we might name, had we space, whose shires were exceptionally heavy folded. In fact, I have never traced the breeding of one of these great scourers where we did not meet the blood of this type of sheep, close up among the ancestors.

The largest number of rams selected from any one flock was that of Dean & Jennings, Vt., who own, and are breeding straight the flock formerly owned by the late Colonel Stowell, who ranked among Vermont's noted breeders. No man succeeded in producing a fleece of wool of a style and excellence peculiarly his own (and everywhere referred to as "the Stowell fleece"), as successfully as he. This quality first cropped out in the great Ram "Golden Fleece" 70, whose blood wonderfully commingles in the flock to-day. Others were selected from the flock of Tyler Stickney & Son, Vt., a flock that has been established for more than half a century, and has justly attained great fame, while others were drawn from the widely celebrated flock of L. P. Clark (recently deceased), Vt., and a few others from the noted breeders of Bridport including the Cranes, Burwell and others. Of those selected in New York, I have only to mention the flocks as those of E. Townsend, Pavilion Center; S. B. Lusk, Batavia; the Martins of Rush; J. D. Sullivan, Livonia; the Rays of Richmond; to show to your readers that the best breeding of this State is represented in the shipment. Those selected from Michigan flocks I did not see, but know that in lines of blood they are descended from the best and most reliable sources.

These sheep are all recorded in the registers of either the Vermont, New York or Michigan Association, and all possess individual merit, as well as purity of blood, being from the top of the flocks from which they were selected.

### Wool-Gathering.

The resolution in the platform adopted by the Ohio Republican Convention touching the duty on wool, which has for its object the placing of those engaged in the great wool interests of the State, is a farce on its face, and serves to show how even statesmen as great as Senators lend themselves to the task of hoodwinking the people.

First, the 50,000 wool-growers of Ohio ought to know that the duty on wool was reduced by Republican and not Democratic votes. The duty was fixed by a Conference Committee on behalf of the two Houses, upon which Ohio had two representatives, John Sherman representing the Senate and Wm. McKinley representing the House of Representatives. The Tariff bill, with the wool duty reduced, received the vote of John Sherman in the Senate and of every Ohio Republican in the House of Representatives, with the single exception of Representative Robinson, of Kenton. Had the Ohio Representatives, either on the Conference Committee or in the House of Representatives, stood solid against the reduction, the duty would not have been reduced. And now come, in face of this record, Senator Sherman and Mr. McKinley and offer as a gag to the wool men "that the wool tariff of 1867 should be restored at the first possible opportunity." The wool-growers of Ohio are doubtless an intelligent class, and it is but fair to deal with them honestly. Hence some information.

Messrs. Sheridan, McKinley & Co. know full well that they are powerless to have the duty of 1867 restored. They know that the Republican party is committed to the policy of no further interference with the tariff; and before the State campaign closes, Sheridan will be heard on the stamp belaboring the Democrats because quite a number of them favor, even by the next Congress, a further revision of the tariff. The only manner in which the tariff can be revised is through a bill which must have origin in the House of Representatives, and be reported favorably from the Committee of Ways and Means. Now, assume that Mr. McKinley, if he gets a seat in the next House, offers a bill to restore the wool duty of 1867. Go further, and assume that the Ways and Means Committee report with a favorable recommendation such a bill to the House. He knows, or ought to know, that in such event the bill would be open to amendment, and upon such a single proposition it would be competent to build a bill revising the whole system of customs duties. He knows, too, that in such a case the Democrats would be strong enough to reduce the iniquitous existing protection to iron and other favored industries, and that in the end the original bill would be put in a shape that not only Mr. McKinley, but a majority of the Republicans, would be compelled to vote against it. No single bill can be gotten through the House of Representatives which singles out a special industry for relief. Mr. McKinley has had experience in this particular no later than last winter, when the endeavor to put through, and was compelled to retreat—a bill to increase the duty on hoop-iron and cotton ties.

The wool-growers of Ohio might as well make up their minds, for the reason given, that the Republican party is absolutely powerless to help them. They are indebted to the Republican party for the plight in which they now find themselves, and the only relief they can expect must come from the Democratic party. The third plank the Republicans of Ohio put in their platform is only to pull wool over their eyes. The Republican party, in its national as well as State organizations, will fight to keep the existing tariff just where it is, and against any special bill for relief, through the fear that it will reopen the entire subject, which they do not want.—Special Washington dispatch to the Cincinnati Enquirer.

### Sheep Notes.

The improved Spanish-American is the best Merino sheep there is for wool growing, and owes its present character to the care of the breeders in selecting the best within the breed and avoiding all out crosses or taints of any description.

Mr. H. V. Pugsley, the well-known Spanish Merino Sheep breeder, writes, please stop that ad of mine, "150 grade ewes with lambs for sale," as they are all sold; thanks to the RURAL. Send bill. Have sold several rams at \$40 up, lately; one to Louisiana, \$40; two to Pettis Co., Mo., one for \$40, the other \$50; another to Kansas, \$40, &c. &c.

The fleece of the Merino has been steadily growing finer as well as more dense, and if the demands of the market are such that it pays to make it still finer, the work can be accomplished within the breed, without going back fifty years for that purpose. If necessity requires, the Silesian Merino affords the opportunity to grow fine wool and from the purest of blood.

Sheep often go a long time without drinking, especially if in a pretty good pasture, and the dew is so heavy that they can fill up with wet grass in the morning; but when they do want to drink water is as necessary to their health and comfort as to that of any other animal. Therefore, keep a supply of pure water in the sheep pasture as much as in any other, and if the sheep do not drink from it give them a little salt once a week under any circumstances.

The English flockmaster has settled two points in British experience. First, that mutton is more profitable than wool, and second, that among English mutton consumers there is a decided preference for down or black-faced mutton. Tender, juicy flesh, with a fine grain and rich flavor, ripe and yet carrying plenty of lean meat, is that which suits the English market. A combination of these qualities is found to most perfection in some of the black or gray faced breeds or their crosses. This preference on the part of the buyers is so marked that the butcher is enabled to give at least two cents per pound more for darkened mutton than for any of the white faced and long-wooled sheep.

WEAN THE LAMBS.—It is better to wean the lambs by the middle of the present month than to wait until after the first of September, as is usually done. Take the ewes out of the old pasture, with the exception of three or four of the old ones, allowing the lambs to remain in the old pasture for a short time, as they will be better contented and will not wander about so much as they otherwise would.

EARLY LAMBS.—In order to have extra early lambs for the spring market, the ewes must be coupled this month, so that the lambs will be dropped in January. The average period of the gestation of the ewe is 153 days. Procure, immediately, a Southdown, Shropshire, Cotswold or Leicester ram.

SULPHUR AS A VETERINARY REMEDY.—The editors of the Journal of Comparative Medicine and Surgery, an excellent veterinary magazine, in an answer to a Texas correspondent, object to the continued administration of sulphur to animals for the purpose of curing skin diseases or destroying parasitic insects. They say that it is dangerous, as "it has produced rheumatism in man and beast" when used long and freely. They recommend in place of sulphur, carbolic acid, or white precipitate ointment, one drachm to an ounce of lard. This is safer, and more sure to destroy lice and ticks.

## The Apiary.

### Handling and Hiving Bees.

A Connecticut correspondent of the New England Homestead writes as follows: In the Homestead of June 30, E. O. Tuttle gives his *modus operandi* of handling swarms. I will give mine, which I think is easier and frequently simpler. When the swarm comes out, cage the queen as he advises, and after all the bees are out (I keep all my queens' wings clipped) throw a cloth over the front of the hive. Then put your caged queen under a box of any kind that is handy; elevate the box on two sticks of wood, having it directly in front of the swarming hive. The bees will in a few minutes have themselves, and you can take care of them at leisure. I then take all the brood from the hive, put in one empty comb and one frame on each side of it half full of foundation; put in the frames of side boxes, two of them on each side; put the case of top boxes in its place on the hive and close it up. I then liberate the queen at the entrance, and give the hive containing the bees a good shake to deposit the bees on the ground; then let them go in at their leisure.

The combs taken from the hive are swept clean of bees and given to the nuclei-raising queen, unless the cells on them are such as are wanted to raise queens from. If they are, the bees are not swept off the combs, but the combs and bees are used for forming the nuclei for saving the young queens.

At the end of a week the old stock is ready for more combs. If it has been properly handled previously, it will now have a few boxes ready to come off. These are replaced by the side boxes, and then I go to the nuclei to which I gave the combs from the old hive; get two that the bees are mostly hatched out of; sweep them clean of bees; put one comb each side of the centre one, spreading the other two far enough sideways to put through, and was compelled to retreat—a bill to increase the duty on hoop-iron and cotton ties.

The sheet of foundation in, has kept the attention of the bees from any more swarming, and you will have two nice worker combs that are made from the wax scales that would have been wasted if full sheets of foundation had been given. The bees are driven into the boxes, and their whole force is concentrated on the surplus. I have tried the above plan ever since 1873, and expect to look a long time for one that is better.

O. G. Russell, in the same issue, advises against too much smoke. Sixteen years working among bees, has forced me to say the same. Too much smoke is as bad, or worse, than none at all. More swarms of bees are made very cross than are naturally so. To illustrate this, I will give one instance out of a hundred I know: In 1880, a gentleman keeping 12 swarms of uncommonly cross bees called on me one day to examine my bees. I lighted the smoker, set it on the ground, took the top off the hive carefully, took off the quilt, top of the frames and lifted out comb after comb without using a particle of smoke. We were at least 30 minutes working with that stock; neither of us was stung, nor did a bee offer to sting. He wanted three queens of this sort, so that he could have as gentle bees. I let him have the queen from that hive (the swarm covered 12 Langstroth frames and was working in the top boxes) and two of her sisters. In six weeks I went to see him, and not being observed by him, I watched his movements. He walked up to the hive, scratched off the top, took hold of the quilt with one hand, and yanked it off with force enough to tear the hive to pieces; in the other hand he had his smoker, from which he injected the smoke in smothering clouds, and the air was full of wofully enraged bees. That hive contained the queen that was mother to the bees I handled without any smoke, yet he told me there was no crosser stock in his yard. One week afterward I handled that same stock without smoke, veil or gloves. The moral is, coaxing is easier than driving.

A very valuable honey plant is alsike clover, and very excellent for hay and pasture. Some farmers think it equal to red. If cut as soon as it blooms, a second bloom will come on just when most needed for the bees. The first crop of the season and not the second is saved for seed. Alsike does well on low, rich land. It may be sown with timothy in the same way and in the same proportions that red clover is sown.

QUEEN REARING.—Henry Alley is the author of a work entitled, "The Beekeeper's Handy Book, or Twenty-two Years' Experience in Queen Rearing." In a nut-shell that tells the whole story, which the writer takes nearly 200 pages to relate. His remarks are authoritative, and the book has been heartily endorsed by raisers of bees throughout the country. One man is so enthusiastic that he says: "It is worth \$10 to me, though I never expect to raise a queen for sale." All the details incident to the care of bees are considered, and advice, suggestion and facts are clearly and concisely stated. It may be obtained from the writer by addressing him at Wenham, Mass.

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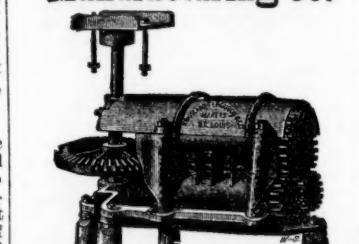
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## Horticultural.

## Missouri Valley Horticultural Society—Regular Monthly Meeting.

The regular monthly meeting of the Missouri Valley Horticultural Society was held at the home of Maj. Frank Holsinger, near Rosedale. Nearly all the members were present and a large number of visitors.

A magnificent table was spread under the maple trees in the yard, which was loaded with every conceivable kind of produce. The display of fruit was good considering the season. A fine plate of peaches of the variety of Alexander was exhibited by W. A. Gossnell. After dinner the meeting was called to order by President Evans. Minutes read and approved.

## STANDING COMMITTEES.

Small fruits—Lindsay, chairman. Judge Newman reports a blight on Hopkins and Turner raspberries. Leaves are attacked on underside and curl up. Mr. Holsinger reports raspberries all rusted except the Gregg, which has rusted some. Goodman thinks it an insect. Lewis believes it is mildew, and caused by wet weather.

Stone fruits—No report from committee. Gossnell reported that wild goose plum at his place a good crop, tolerably free from curculio.

The committee on orchards, Gano, chairman, reported apples generally light crop, Janettus very full; fruit generally very defective and imperfect. Mr. Goodman has received reports from all over the state of Missouri which indicate one-fourth a crop of apples. Dickinson reports an estimate from Kansas which places the crop at 33 per cent. Pears reported a total failure.

The chairman of the committee on vineyards was absent. Mr. Espenlaub reported the early varieties a light crop, Concord, half crop; Goethe, a full crop. The committee on entomology, Holsinger, chairman, reported.

A very interesting essay was read by Mrs. A. B. subject, "American Homes," which was turned over to the secretary of the State Horticultural society to be published in their forthcoming report. "The history of the Missouri Valley society," written by Maj. Ragan, to be published with Mississippi Valley report, arriving too late for publication in that report, it was moved and adopted that said report be furnished to the Missouri and Kansas State Horticultural societies.

It was moved and adopted that the society make an exhibition of fruit at the Bismarck and Kansas City. All members were requested to bring specimens to the next meeting, to be placed in cold storage. The committee on fruit on table made the following award of prizes: Best plate Early Harvest, L. A. Goodman, 50 cents; best plate Sweet Bough, L. A. Goodman, 50 cents; best plate Red Astrachan, G. S. Espenlaub, 50 cents; best plate Early June red, G. W. Hopkins, 50 cents.

Blackberries—Best box blackberries, B. S. Hogue, 50 cents. Plums—Best box plums, W. A. Gossnell, 50 cents; best box raspberries, F. Holsinger, 50 cents; best box cherries, F. Holsinger, 50 cents; best plate peaches, W. A. Gossnell, 50 cents; best box red raspberries, G. W. Hopkins, 50 cents.

Flowers—Best table, Prof. G. A. Goodman, 50 cents; best hand amateur, Ella Hopkins, 50 cents; best case, Ella Hopkins, 50 cents.

Sales from fruit, \$7.80. The society adjourned to meet at the home of J. C. Cravens, Clay county, third Saturday in August.

## NOTES.

Small fruits are looking well. Strawberry beds that have been well cultivated are very fine. Other small fruits have made a fine growth. Blackberry crop very light.

Insects, owing to the superabundance of moisture, have not been as destructive to horticulture as if the season had been dry. The chinch bug has disappeared, as have many others. The curculio, gopher and codling moth have come to stay, apparently. The apples are badly damaged already and as the codling moth is double brooded, I fear that a good specimen will be the exception. Where care was taken with the plum, some fine fruit is the result.

## A Strawberry Bed.

Those who meditate setting strawberry beds this summer should see to it that once the ground is prepared. We once delivered some strawberry plants to a purchaser upon a certain agreed-upon day in August. The plants were lifted in the evening twilight and carefully packed in a basket with damp moss, set in the cellar, and the next morning taken to their destination, where I found the hired man spading up some ground in the corner of a rough timothy meadow as a place for planting them. The plants had been ordered six weeks previous, and had the ground been spaded at that time and kept good, filling up the interstices and covering the surface until time to plant, the prospect of berries another year would have been at least 99 per cent higher than it was. The idea of putting the tender roots of strawberry runners in a freshly turned sod to contend with an August sun, is a striking commentary on the horticultural knowledge and practice of the farmer who did it. A rich, thoroughly mellow soil is absolutely necessary to the successful planting of strawberries in midsummer. —Ohio Farmer.

## Two New Seedling Peaches.

Through the courtesy of our horticultural friend, Mr. Charles A. Green, we had the pleasure of testing two new seedling peaches. The Dunlap is one of those yellow peaches, like the yellow Albe, Hill's Chili. Wager and others which reproduce themselves, or very nearly do, from pits. It is a very handsome, round, bright yellow peach, of medium size, deep yellow flesh, and of a sweet, juicy, delicious flavor. The pit is very small, and perfectly free. We cannot recall another peach ripening so late as this of such good quality. The Genesee came from the grounds of Mr. H. E. Hooker, nurseryman, of this city. It originated on a city lot belonging to the late brother of Mr. Green, and the tree from which the specimen was obtained was heavily loaded with fruit. It is a large, oblong peach, in form and color resembling the Early Crawford; a shade lighter color; and resembling it very much, we thought, in quality. Judging from a single specimen of each, they seem to be promising varieties, worthy of further trial. —American Rural Garden.

## Fruits as Food and Medicine.

Now that the fruit season will soon be here, it will doubtless be interesting and highly useful to our readers to learn something of the nutritive, medicinal action, wholesomeness, medicinal action, and proper use of the fruits and vegetables which God has so abundantly blessed our earth. But while they are blessings, they like many other blessings, have been converted into curses through the ignorance and perversity of mankind. Yet the fruit kingdom affords an almost endless variety of delicious and wholesome food, and, in many cases, the best of medicines, when properly used.

Dr. Parley truly says: "Were we to form an opinion of their value from their abuse, we should certainly be rather disposed to class them under the head of poisons than of stimulants." Let us now inquire why this is so. Is it because most fruits are unwholesome in themselves? or is it because they are improperly used? Evidently the latter is the true reason. A beneficent Providence never intended to afflict, but to bless, the human family by giving them a bountiful supply of fruit pleasant to the eye and sweet to the taste. What, then, is the trouble? How comes it that such blessings are perverted till they may be compared with water?

"Fruit of that forbidden tree  
Whose mortal taste brought  
Death into our world,  
And all our woe?"

The great error in the use of fruits consists in crowding the stomach with them when it is already full; in eating them at all times between meals when there is no natural demand nor desire for them. When taken along with the food, as food, in moderation, or as a dessert, when the stomach is not full, they are highly conducive to health; and, as the writer quoted above very truly says, "they appear to be providentially sent at a season when the body requires that cooling and antiseptic aliment which they are so well calculated to afford." The correct rule for the use of fruits is to use them moderately between meals, and at meals, as a part of the meal, or as a dessert, when the stomach is not overloaded with other food. Though desserts are, as a general thing, objectionable, because taken when the stomach is already full, fruits are much more wholesome, when taken in this way, than the pastries, cakes, etc., generally used as desserts. Let us now briefly review the different kinds of fruits, considering them in relation to nutritive, digestible, etc.

All the fruits which we are blessed with, the peach is the most delicious and digestible. There is nothing more palatable, wholesome and medicinal than good, ripe peaches. They should be ripe, not over-ripe and half rotten; and of this kind they may make a part of either meal, or be eaten between meals; and it is better to make them a part of the regular meals. It is a mistake idea that no fruits should be eaten at breakfast, or before breakfast. It would be far better if our people would eat less bacon and grease at breakfast, and more fruit. In the morning, there is an acid state of the secretions, and nothing is so well calculated to correct this as cooling sub-acid fruits, such as apples, peaches, etc. Still, most of us have been taught that eating fruit before breakfast is highly dangerous. How the idea originated I know not; but it is certainly a great error, contrary both to reason and facts.

Plums are less digestible than peaches, on account of their pulp; and all pulp stone fruits are more or less indigestible. In proportion to the quantity of this pulp, which is likely to cause fermentation, resulting in diarrhea. This is a frequent trouble in children, who often eat them half ripe, and who frequently swallow them—pulp, seeds and all. The juice alone should be taken into the stomach, and this wholesome.

The apple is one of the best of fruits. Baked or stewed apples will generally agree with the most delicate stomach, and are an excellent medicine in many cases of sickness. Green or half-ripe apples, stewed and sweetened, are pleasant to the taste, nourishing, cooling and laxative, being far preferable, in many cases, to the abominable doses of salts and oil usually given in fevers and other diseases. Raw apples, and dried apples stewed, are better for constipation than most liver pills.

Oranges are very acceptable to most stomachs, having all the advantages of the acid diluted to; but the juice alone should be taken, rejecting the pulp.

The same may be said of lemons, pomegranates, and tamarinds. Lemonade is the best drink in fevers; and when thickened with sugar, is better than sirup of squills and other nauseous drugs, in many cases of cough.

Tomatoes act on the liver and bowels, and are much more pleasant and safe than blue mass and "liver regulators." The juice should be used alone, rejecting the skins.

The small-seeded fruits, such as blackberries, figs, raspberries, strawberries, grapes, etc., may be classed among the best foods and medicines. The sugar in them is nutritious, the acid is cooling and purifying, and the seeds are laxative. We would be much the gainer if we would look more to our gardens and orchards for our medicines, and less to our drug stores. To cure a fever or act on the kidneys, no febrile or diuretic is superior to watermelons, which may with very few exceptions, be taken in sickness and in health, in almost unlimited quantities, not only without injury, but with positive benefit. But in using them, the water or juice should be taken, excluding the pulp; and the melons should be fresh and ripe, not over-ripe and stale. —Dr. Wilson, in Southern World.

## Bewildering Facts in Tree Growth.

But while it is possible to increase the saccharine principle, and also to modify the hydrate malic acid in fruits, it is entirely beyond our power to change the fixed nature of vines or trees by any methods of cultivation or fertilization. There is nothing more wonderful in nature than the persistence with which vegetable structures adhere to their original bent or design. We all know that two trees growing side by side from the same soil, breathing the same air, and precisely alike in external and internal substance, will produce fruit totally dissimilar in chemical constituents and physical appearance. If a young sour apple tree is cut off low in its trunk and scions of another kind are inserted, it is changed only above the point where they are placed. The chemical reactions below continue true to the original instinct, and if fruit comes from a sprout, it is charged with the acid juices of the parent tree.

We have thus the bewildering fact brought before us, that the sap circulating through one portion of a tree culminates in the production of excess of acid in the fruit, while in another there is found an excess of sugar. It is not unusual to observe a newly set scion bud, blossom and bear fruit the first year. The fruit may weigh ten times as much as the fruit of your readers, especially the fruit of the nutmeg necessary for its growth, but the little twig, transplanted to an alien limb, will set up a laboratory of its own, and from the strange juices to it will manufacture fruit totally dissimilar to its companion fruits growing in close proximity. —Country Gentleman.

## American Pomological Society.

EDITOR OF THE RURAL WORLD.—Allow me through your paper, again to jog the mind of your readers, especially those interested in pomology, that the American Pomological Society is to meet on September 12th, in Philadelphia. Missouri usually takes an interest in these meetings and sends a delegation, and when she sends a collection of fruit never fails to come off with honors. It is not improbable that the next meeting, in two years from September, can be secured for our State. Everything now indicates a fine attendance. President Wilder will doubtless be present. How many local horticultural societies of your State will be represented?

Truly yours, W. J. BEAL, Sec'y.

## PROGRAMME OF BUSINESS.

Wednesday, 10 o'clock in the morning and 3 o'clock in the afternoon.

Thursday, 9 o'clock in the morning and 3 o'clock in the afternoon.

Friday, 9 o'clock in the morning and 3 o'clock in the afternoon.

Rules of speaking. Five minutes, and no person to speak more than twice on the same subject, without unanimous consent.

Wednesday, 10 A. M. Introductory exercises; appointment of committees, viz., on credentials, on nomination of officers, on record of fruits exhibited, on award of medal, on resolutions. 3 P. M. President's address; reports of committee on credentials and nomination of officers; election of officers; reception of treasurer's report; appointment of a place for the next meeting of the Society.

Thursday, 9 A. M. Reports of standing committees; discussion of the value of fruits enumerated in the catalogue, as indicated by stars, to be called by the Secretary in alphabetical order, as follows: Small fruits, grapes, peaches, pears and apples. At the close of each division, statements relative to new varieties will be received. 3 P. M. Continuation of morning session.

Friday, 9 A. M. Reports of committees on fruits exhibited; reception of essays; continuation of discussion on value of fruits, and resolutions. 3 P. M. Completion of business; adjournment. 6 P. M. Banquet.

## ESSAYS.

The following named gentlemen (the list is alphabetically arranged) will prepare papers:

Hon. F. J. Berckmans, president of the Chicago Horticultural Society.

Prof. T. J. Burrill, Illinois Industrial University, on Diseases of Plants.

Prof. J. L. Budd, Iowa Agricultural College, on Experimental Horticulture west of the Lakes.

Col. W. J. Colman, editor of the RURAL WORLD, Missouri, on Utilizing our Fruits.

Prof. J. Henry Comstock, Cornell University, on Insects of the Orchard.

Dr. W. G. Farlow, professor of cryptogamic botany, Harvard University, on Uredineae (rusts and mildews).

Chas. A. Green, editor of the Fruit Grower, on Certain and Uncertainities.

Samuel Hape, Esq., Atlanta, Georgia, on the Effect of the Evening Sun on Fruit Trees.

Byron D. Halstead, D. Sc., editor of the American Agriculturist, on Fungi.

Josiah Hoopes, Esq., Ex-President of Fruit Grower's Society of Pennsylvania, on Peach Culture in Pennsylvania.

Prof. W. R. Lazenby, Ohio State University, on Dichogamy in Cultivated Plants; i. e., noted examples where the stamens of a flower mature before the stigmas or the stigmas before the stamens.

Hon. T. T. Lyon, President Michigan State Horticultural Society, on How can we best maintain a high standard of quality in fruits, as against the tendencies of commercial pomology.

J. C. Plumb, Esq., Milton, Wisconsin. Prof. C. V. Riley, U. S. Entomologist, on Recent Advances in Horticultural Entomology.

Dr. E. Lewis Sturtevant, Director of the New York Experiment Station, on Some things the Station can do for Horticulture.

Prof. S. M. Tracy, Missouri University, Secretary of the Mississippi Valley Horticultural Society.

## Hints to Vegetable Shippers.

Heard Bros. & Co., of New York, furnishes the editor of the Quiltman Free Press with the following hints as to the packing, shipping, etc., of watermelons and potatoes, which it will be well for our truckers to profit by:

Watermelons should be carefully selected as to size, and none but the largest should be sent here. Small melons sell at such low prices that the freight and charges on them when shipped from distant points leave no margin for profit, and when mixed with large ones they hurt the sale of the entire lot. By all means avoid putting in long or curved neck melons, as they always sell at a loss. It is very important that potatoes should be barreled as soon as possible after they are dug, as lying in the sun heats them and causes them to rot. Avoid digging immediately after a heavy rain. All potatoes should be barreled when dry and cool as it is possible to have them. Assort very carefully and ship nothing but the largest, having them uniform in size as possible, as culls or small ones do not increase the bulk much but add to the weight and damage the sale so that they bring no returns and actually depreciate the value of the full sized ones, with which they are mixed. Use full sized, round hoops, well vented barrels; fill to heaping and shake down thoroughly. If impossible to get barrels, and crates have to be used, they should be as near barrel size as possible—say slats to be thirty-six inches long, and heads 12x20 inches, with partition in center. —Southern World.

The Minnesota horticulturists at their late convention declared the Wilson the best strawberry for the farmer, as well as the best for marketing.

## Ampelepis or Virginia Creeper.

The common Virginia creeper, or as it is often called "woobine" and "five-leaved ivy," has long been held in esteem as one of the most desirable of hardy climbers. It is easily grown, and very soon covers a wall or other object with a dense mass of green. One of the most attractive features of the plant is its habit of assuming rich tints of red and orange in the Autumn. The Virginia creeper is a common plant in woods in the Northern United States. It is the only native woody climber which has five-parted leaves. It can readily be distinguished from the poison ivy, which has wider, three-parted leaves. The creeper is a near botanical relative of the grapes, its flowers and fruit having almost the same structure as they.

Another desirable climber, introduced some nine or ten years ago from Japan, is that known as Vitis Ampelopsis (Ampelepis Vitis). In many respects this species is superior to the native Virginia creeper. Its most marked superiority is the readiness and tenacity with which it clings to a wall. In taking plants of the Virginia creeper one should be careful to select those specimens which cling to trees or rocks. Some plants do not cling and cannot be made to do so. Even the strongest-tendrilled specimens are apt to be torn from their support by side currents of wind, or a side wind. This is never possible with the Japanese plant, which has shorter tendrils holding the plant very close to its support. The Autumn coloring of the Japanese species is a rich bronze, but is not as showy as the native. Its leaves are thick, palmate, three-lobed and toothed. It is perfectly hardy in this latitude, where it is sold by all dealers.

## A Fruit Tree Wash.

For the past twenty years, writes William Saunders to the New York World, I have used a mixture of lime and sulphur for a wash for the prevention and destruction of fungoid growths on all kinds of fruit trees, and with decidedly beneficial effects. It is now well ascertained that many of the diseases of both vegetables and animals are due to fungoid growths, and sulphur is the best known and one of the most potent antiseptics for the mycelium and spores of microscopical fungi, and the most practical mode of using it is as an ingredient in the ordinary lime wash, applied to fences and external woodwork. As a sanitary auxiliary in cities, its employment will become general as its usefulness in the prevention of zymotic diseases becomes known. If every fence, tree-box, out-building or rough wooden structure in this city could at once receive a coating of this wash, it would greatly check the spread of malarial disorders. It is not costly, and the sulphur imparts additional adhesive qualities to the mixture.

The wash is prepared by placing half a bushel of fresh burned lime and eight pounds of powdered sulphur in a tight barrel, slacking the lime with nearly boiling water, the mouth of the barrel being covered with a cloth. When cool it is ready for use as ordinary white wash.

## Horticultural Notes.

Peaches, cherries, plums, or any other fruit trees may be budded this month if the bark parts freely from the stock. Budding may be successfully performed early in September, but the sooner it is done now, the better.

Southern Illinois is shipping most of the peaches offered in St. Louis market at present. The finest and most expensive fruit exposed for sale comes from Palestine, Texas, just now—selling from \$1.50 to \$2.00 per box.

Gadsden and Humboldt, Tennessee, neighboring towns that grow and ship quantities of fruits and vegetables, are joining hands in the erection of a fine cannery establishment—a very sensible move for the growers and shippers of that section.

All nurserymen and gardeners appreciate the importance of thorough drainage. The crops they put on the land are often worth more than the first cost of the land itself. Hence it is not uncommon for them in some places to make drains on land leased for five or six years, as the losses from excessive water would be greater than the cost of draining it off.

It should be a practice to cut the fruit stalks of flowering plants as soon as the flowers fall. It is an exhaustive process to the plant to bear fruit. Such plants as snapdragons, Chinese pinks and other biennials that flower the first year from seed can generally be made to flower the second year if not allowed to fruit. Care should also be exercised in regard to the plants from which seed is to be selected. The best and strongest plants mature the best and strongest seeds. Any particular color or form can be perpetuated in many cases by a judicious selection of seed.

Some statistics were recently published in the Chicago Tribune relative to the peach and apple crop, showing the proportion credited to each state. Missouri and Illinois, for instance, were credited with 90 per cent of a full crop of peaches, and other figures equally of erroneous and misleading followed. A number of fruit dealers in the more Eastern cities begin to look Westward for their supplies, as indicated by correspondence flowing in to the operators here. Neither of the states to which so large an amount of fruit has been awarded will have one-fifth of a crop. The apple crop is light East and West, and prices will average well throughout the season.

Now is the time to begin to gather seeds of trees and herbaceous plants. It is desirable to select seeds from plants while they are in a thrifty condition, before they begin to be exhausted from over flowering and produce smaller flowers and weaker seeds. It is not necessary to wait until the seed-pods are ripe and burst before seeds are secured. The seeds are apt to be lost if gathering is delayed too long. When the seed-pod is fully matured and begins to assume a brown or yellow color, it should be picked and laid in a dry place. If a considerable portion of the stem is taken with the pod the seed will usually mature even if quite green. Seeds of perennial plants should be planted out this summer as soon as they are dried and the pod burst. Most of them will then be ready for flowering next year. Seeds of native plants found in the woods and fields can be sown as soon as collected, whether perennials or annuals. Many of the beautiful natives are easily grown from seeds, especially those whose seeds are large.

A favorite practice of dealing with the peach tree borer in the Michigan fruit region is to remove the earth about the base of the tree to the depth of several inches, leaving the roots exposed. The borer works best under the ground, and exposure to the weather seems to destroy many of them. The hollow is allowed to remain until after a few hard frosts in the Fall, when the earth is heaped about the tree for Winter protection. This practice is of course supplemented by digging out the borers with a knife. Many have tried driving nails into the base of the tree, and several other devices, but to little or no purpose.

The most valuable of recent introductions from Japan is *Styrax japonica*, a shrub attaining a height of six or eight feet and bearing a profusion of most charming white flowers of the size of an apple blossom. This species was first described in 1835 by Siebold and Zuccarini, in their work upon Japan plants. It has only recently been introduced into this country, however, and is not yet grown by more than two or three nurserymen. It is bound to become a general favorite as soon as known. The most charming feature of the plant is its habit of bearing slender, horizontal branches, along the upper side of which are the leaves, while the chaste, wax-like flowers hang on the slender pedicels beneath. A period of flowering is late Spring, the blossoms remaining for about two weeks. It is perfectly hardy in this latitude.

HAVE A STRAWBERRY BED.—If the weather is suitable, new beds may be formed now. For gardens, the rows may be three feet apart, and the plants one foot apart in the row. Take up a ball of earth with the most vigorous young plants, and be sure to set them half an inch to an inch deeper than they stood in the old bed. An occasional light sprinkling of gypsum and hard wood ashes will do good service in promoting growth and fruitfulness.

THE "ATLANTIC" STRAWBERRY.—This name has been given to a new strawberry by a convention of fruit growers which recently met at Hammon, N. J. It is a seedling raised by Mr. Potter, of that place, and is said to be worthy of introduction. It ripens fully a week later than the Wilson, and ten days later than the Crescent, and is indorsed by several noted strawberry growers for its good qualities of flavor, size, color, and productiveness. It is in the hands of William F. Bassett, of Hammon.

WELLS' "ROUGH ON CORNS,"—15c. Quick, complete, permanent cure. Corns, warts, bunions.

**DARBY'S Prophylactic Fluid.**

For the prevention and treatment of Diphtheria, Scarlet Fever, Small Pox, Yellow Fever, Measles, Rubella, etc.

The free use of the Fluid will do more to arrest and cure these diseases than any known preparation.

**DARBY'S PROPHYLACTIC FLUID.**

A safeguard against all pestilence, infection and epidemic.

Also, as a Gargle for the Throat As a Wash for the Face, and as a Disinfectant for the House.

A CERTAIN REMEDY AGAINST ALL CONTAGIOUS DISEASES.

It neutralizes at once all noxious odors and gases. Destroys the germs of disease and septic matter, doing imperceptible in the air, or such as have effected a lodgement in the throat or on the person.

A certain remedy against all contagious diseases.

Perfectly Harmless, used Externally or Internally.

**J. H. ZELIN & CO., Proprietors.**

MANUFACTURING CHEMISTS, PHILA.

Price, 50c per bottle; pint bottles, \$1.

**Vital Questions.**

Ask the most eminent physician of any school, what is the best thing in the world for quieting and allaying all irritation of the nerves and curing all forms of nervous complaints, giving natural, childlike, refreshing sleep always?

"Some form of Hops!"

Ask any or all of the most eminent physicians:

"What is the best and only remedy that can be relied on to cure all diseases of the kidneys and urinary organs, such as Bright's disease, diabetes, retention or inability to retain urine, and all the diseases and ailments pertaining to 'Women'?"

"And they will tell you explicitly and emphatically—'Zechin.'"

Ask the same physicians:

"What is the most reliable and surest cure for all liver diseases or dyspepsia; constipation, indigestion, biliousness, malarial fever, etc., and they will tell you—'

"Mandrake! or Mandoline!"

Hence, when these remedies are combined with others equally valuable,

And compounded into Hop Bitters, such a

[Concluded next week.]

**AYER'S PILLS.**

A large proportion of the diseases which cause suffering result from derangement of the stomach, bowels, and liver. AYER'S CATHARTIC PILLS act directly upon these organs, and are especially adapted to cure constipation, indigestion, dyspepsia, headache, dizziness, and a host of other ailments, and for all of which they are a sure, prompt, and pleasant remedy. The extensive use of these pills by eminent physicians, and the regular practice, shows unmistakably the estimation in which they are held by the medical profession.

## "REX MAGNUS"

The Humiston Food Preservative.

It is what its name indicates, "A Mighty King," the Conqueror of Time. It is a real, practical, successful Food Preservative and is of the utmost value to housekeepers, farmers, dairymen, butchers, grocers, and to all mankind.

It Keeps Food Fresh and Sweet.

REX MAGNUS will positively preserve meats, fish, milk, butter, eggs, and all articles of food for any length of time and in any climate, perfectly retaining their natural flavors, freshness and appearance without change.

It Improves the Quality.

This Preservative is composed of simple and perfectly harmless ingredients. It does not affect the taste or appearance of the food and by its use tough and dry meats are made tender. It improves the quality and thereby aids digestion.

Fresh Oysters Thirty Days Old.

Mr. H. P. Hubbard, the well-known advertising agent of New Haven, Conn., kept an open jar of oysters which had been treated with the proper brand of REX MAGNUS, exposed in his private office for one month, and at the end of that time they were pronounced by epicures to be the finest they ever ate.

You Can Prove It.

at a slight expense to your complete satisfaction.

You do not have to buy a county right, nor costly recipe. We sell neither the one nor the other. All druggists and grocers keep it, or we will send sample packages prepaid by mail or express as we prefer. Name your express office. This succeeds where all others fail.

Brands and Prices.

"Vandine," for meats, poultry, &c., 50 cts. per lb. "Ocean Wave" for oysters, 50 cts. per lb. "Pearl" for cream, 10 cts. "Snowflake" for milk, butter, &c., 50 cts. "Queen" for eggs, 10 cts. "Cocoa Vine" for fruit, 50 cts. "Anti-Mold" 50 cts. per lb. each.

Put up in 1 lb. and 5 lb. cans, and in 25 lb. boxes. Mention the name on your order.

THE HUMISTON FOOD PRESERVING CO.,

72 Kilby Street, Boston, Mass.

For sale in Chicago by Sprague, Warner & Co., Wholesale Grocers, and Van Schaack, Stevenson & Co., Wholesale Druggists.

THE ONLY GENUINE

**LEMON ROCK and RYE**

COMBINED WITH ACID PHOSPHATE.

CAUTION: Owing to the great demand which has followed the introduction of our new and improved "Lemon Rock and Rye," a number of unscrupulous parties have been endeavoring to counterfeit the same. We therefore caution the public to examine each package carefully, and if it shows any indication of being a counterfeit, to return it to the dealer from whom it was purchased, and to report the same to the authorities.

A REWARD of \$100 will be paid to any person who will furnish information that will lead to the detection of any person guilty of counterfeiting the same. For full particulars, send for circular to the St. Louis Wine Company, St. Louis, Mo.

**DR. WHITTIER,**

617 St. Charles St., St. Louis, Mo.







## Creamery Outfits.

HON. NORMAN J. COLMAN: This community is considering the subject of establishing a creamery, but we lack information. Messrs. Holt and Hall of Iowa have built creameries at Monroe City, La Plata, Huntsville and other points for \$5,500 in money and \$1,000 in stock as a bonus. The dean of the agricultural college at Columbia, Mo., who is a practical dairyman, says that we ought to build a creamery of five or six hundred pounds daily capacity for \$2,500. Now, if we could build for these figures it could be done at once, but if it takes \$5,500, it is doubtful. We know of no one more likely to be informed on this subject than you, and trust that you will give us the information desired. If however you are not posted would you kindly inform us to whom we could apply for light. Hon. J. M. Proctor and myself are a committee to collect information, and we are indorsed with letters from Hon. J. S. Hollins, President S. S. Laws and the Dean of the Agricultural College. If we should conclude that it is best to visit some, what county would you recommend as the one having the best establishment.—H. L. Gray, Sturgeon, Mo. P. S. I omitted to say that Mr. Proctor is the present member of the legislature from this county, and if you choose you may address him.....

REPLY. It occurs to us that \$6,500 is a pretty good price for the necessary plant for such a factory, and are decidedly of the opinion that the dean of the college is nearly correct. It occurs to us that you should see other factories anyhow before you invest a dollar, to see how they order their business, what the plant costs and whether they are a fair one. In a very short time we hope to present in these columns some data that may guide you. The industry is regarded in this State as one of great promise, and we are quite sure that a little competition among those who furnish supplies will do no harm.

## The Horseman.

## The Bashaw Family of the East.

It would be a poor tribute to the memory of our highly-esteemed friend, the late Charles L. Sharpless, to allow the mistakes that have appeared about the breeding of Duquesne to pass unnoticed.

Mr. Sharpless' well-known lively interest in the breeding of our American trotter and Jersey cattle calls for more than passing notice, at a time when a trotting stallion, bred by him (with his own selection of American trotting elements, has won his way into the magic circle of 2:20), as Duquesne recently has done. This gentleman made many experiments with all of the so-called fashionable families, and cast them aside as trotting sires, returning to his early conviction, that the descendants of our "Bashaws of the East" possessed that game resolution and quick nervous energy so essential to the make-up of our great American trotter.

This experience led him to purchase Tippecanoe (by Doublet's Black Bashaw, dam by Tippecanoe, son of old Tippecanoe), and use him as a stock horse, until he could purchase one that pleased his fancy better, which was Blumberg's Black Bashaw, the sire of Cozzette and the wear-and-tear trotter John H.

Tippecanoe was a very handsomely-finished brown stallion, and a level-going, easy-gaited trotter. He was a remarkably prompt, high-strung driving horse, and did not require any bearing rein.

The dam of Duquesne was the bay mare Wild Rose, by Rysdyk's Hambletonian. There her pedigree must stop. An investigation of it by your humble servant, three years since, disclosed the fact that her dam was a high-strung mare of thoroughbred characteristics, purchased from a band of gypsies, breeding unknown. The curious can inquire of William J. Tutthill, Blooming Grove, Orange Co., N. Y.

Duquesne was bred and foaled the property of Charles L. Sharpless, Chelton Hills, eight miles north of Philadelphia, Pa., the spring of 1873. That fall Mr. Sharpless sold Wild Rose and Duquesne to Mr. Paul Hackett, of Pittsburgh, Pa. While Duquesne was by his dam's side, she was again bred to Tippecanoe. In 1874 she produced the brown stallion Hugo, who is also quite a fast horse.

Duquesne is a handsome chestnut stallion, with a strip on his face, and hind ankles white. His head and neck are well joined, and his ears are a good height. These are Bashaw characteristics; while his driving power bears resemblance to that of his dam.

Referring to our Bashaws of the East the following facts will command the attention of unprejudiced breeders: The dam of Buzz Medium was by Nonpareil, son of Long Island Black Hawk. The dam of Jimmy McKee's Young Fullerton was the Vannort mare by Jupiter. The dam of Menelaus (the sire of Cleora) was by Long Island Black Hawk. The dam of the best Wilkes (all things considered, road and track) that ever looked through a bridle, namely, May Bird, was by John C. Fremont, son of Long Island Black Hawk, who was not a Black Hawk horse, but a descendant of our Bashaws of the East. Are more arguments wanted? Why have Hambletonian enthusiasts always aimed to cough down such facts? "One swallow does not make a summer," neither can the ideal American trotter, as yet, be claimed by the adherents of any one family.—Breder's Gazette.

## Have Your Horse in Condition.

The victory of the California filly Eva in the race for four-year-olds at Chicago last Saturday was the result of a carefully laid and well-executed plan by Orrin Hickok, who drove her, and the lesson which the race has taught to the other people who had horses in it is one that should be taken to heart by every trainer and breeder in the country. It is a short one, and is: Have your horse in condition.

Cold races are made for, and supported by breeders. The owner of every stallion is naturally anxious to have the get of his horse obtain reputation as early in life as possible, and this can be accomplished only by trotting them in public races, and, more than that, winning. But the trouble with the men who make entries in races for youngsters is that, in a majority of cases, they do not give the animals in their charge anything like the preparation that a horse should have in order to trot a creditable race. They are, of course, afraid of overworking, and perhaps permanently injuring the animals; but, if reputation for sires is what they are after, it is far better to spoil several colts than to have one act like a quitter in public. In the race last Saturday, Alghath and Bonita clearly had the speed of the others. The first named won the opening heat of the race in 2:23, beating Bonita hardly a length, but even in that mile Governor Stanford's filly quit badly. She was certainly faster than all the rest, because when the word was given in the first

heat she was on the extreme outside, and yet before the first turn, was reached she had trotted around all the others, and had taken the pole. She lost the heat because she quit. Here is a filly that, when two years old, trotted a public mile in 2:24, and yet, as a four-year-old, she cannot last out a mile in 2:21. Nothing but lack of condition can explain such a performance, and, as she was only third in the second heat, and last in the third and fourth heats, not having made a break in all this time, the conclusion is irresistible that she was not keyed up for a race.

Alghath, after winning the first heat in 2:23, is never able in the succeeding three heats to get better than fourth place. The only one she beats all the time is Bonita. Jersey Lily and Billy Clinker trot their heats out gamely, and in the last three heats easily outfoot their superiors in speed, Alghath and Bonita. They had both been trotting races, and hard ones, too, in Iowa, and were seasoned for the fray. Eva outlasted them all, simply because she had received the most careful preparation that a young horse ever underwent. For several weeks Hickok had her at the Cleveland track, and once in every six or eight days she would get a regular horse race. Bill McGowan, "the wild man from Michigan," would get behind old Lucy, the pacer, a boy would be put on a runner, and Hickok would drive Eva. Then all the forms of a race would be gone through with. There would be from five to fifteen scorings before each heat, and when a start was finally made, the race would be in earnest from wire to wire. From four to six heats would be trotted, and the result was that when Eva reached Chicago she was as whole-bone and steel, and fit to trot all day. Hickok's policy was the correct one, and he won the race where many another man would have lost it.—Breder's Gazette.

## Profitable Horse Farming.

Horses suitable to match in pairs for the gentleman's carriage, and also to go single in the coupe, are profitable to raise. To obtain these, select perfectly sound mares, fifteen to sixteen hands high, well formed, with good temper and spirit, fine action, and as much style as can be got combined with the above requisites. The horse to breed to these should also be as perfect in all things as the mares, special attention being paid to a kind disposition, good eyes, feet and legs. In one or more of these four points the carelessly chosen stallion is often most blamably deficient. As like begets like, it is out of the question to expect choice offspring from diseased or imperfect parents. The stallion ought to be sold to his hands high, and weigh, in proper working flesh, 1,150 to 1,350 pounds. His breeding must be good, either of the trotter or race-horse class. Objection may be made by some to the latter, but if of pony-build, kind temper, sound, with extra-broad, flat, shewy legs, clear, tough hoofs, he is the most preferable, because his make-up is of a more enduring and superior order to all others, save the Arabian. The latter is too small to use for carriage and coupe horses, though answering as well as the smaller horse to get such as are suitable for a lady's phaeton or her saddle.

This larger class of horses above can be broken to do light work on a farm at three years of age, kept there until six, and then sold. During these three years they will pay for their raising, and, if well matched, can then sell all the way from \$500 to \$3,000 or more the pair, according as they prove. Single horses will bring half this amount, or more if extra fine. Some of these will prove as good under the saddle as others in harness, and may then be sold at a fancy price. The best of the above horses are always scarce in city markets, and sure to sell quickly when offered there, and at high prices. There is also an excellent steady demand for them abroad, the larger ones for noblemen and wealthy gentlemen's carriages, those of a size less, with good wind and fine action, for the mount of army officers and also for the hunting field.

## Horse Notes.

At a large and influential meeting of breeders held at Norwich, England, July 7, under the presidency of Mr. A. Hammond, it was decided to establish a stud-book for roadsters, hackneys, cobs and ponies, and a society was promoted with that object. The title of the stud-book is proposed to be "The Roadster Stud-Book," but the matter will be determined at the York meeting of the Royal Society.

Good, sound, green horses, capable of pulling a road wagon at a 2:40 gait, are very scarce, while the demand for such is constantly increasing and prices advancing. Such animals are not often produced by breeding inferior mares to scrub stallions, as many farmers know from actual experience. It is true that the use of cheap stallions of uncertain breeding enables one to save a few dollars in stud fees at the start, but for every dollar so saved not less than ten dollars are actually lost.

Much of the improvement in the speed of the trotting horse of late years is due to attention paid to tracks, and more especially to the improved construction of the vehicles the horses have to draw. In this line none has a greater right to pre-eminence than the celebrated Chicago house of Thomas H. Brown & Son, Mr. Brown having taken his son into partnership. The Novelty Carriage Works are known from Maine to California, and are patronized by such owners and drivers as Robert Bonner, Samuel Gamble, Leland Stanford, R. West, H. C. McDowell, John Splan, W. H. Crawford, Dan Mace and others whose names are "too numerous to mention."

It is a fact worthy of note that four of the seven sons of Alexander's Abdallah, which have produced 230 trotters, are from daughters of Mambrino Chief. These are Abdallah Pilot, foaled in 1860; dam Blandina; by Mambrino Chief, from the Burch mare, whose sire was Parker's Brown Pilot, he by Copper Bottom. Abdallah Pilot is represented in the 230 list by Pickard (2:14), and Red Jim, with a three-year-old record of 2:30. Thorndale, another of the four, was foaled in 1865, from Dolly, she by Mambrino Chief, from a mare said to be by a son of Potomac, second dam by the thoroughbred, Saxe Welmer. Thorndale was represented at the close of last season by Edwin Thorne (2:16), Daisydale (2:19), and May Thorne (2:21).

Crib-biting in horses is often a mere habit, but it may be caused by disease. Indigestion occasions a constant irritation and uneasiness, which may impel the horse to take hold with the teeth and stretch the neck as a means of relief. From this grows the habit of crib-biting and wind-sucking, which ceases when the cause is removed. As a remedy give the horse in his feed, daily, for a few weeks one drachm of copperas and half an ounce of ground ginger, and feed him upon cut feed, with crushed or ground grain, and an ounce of salt in each feed.

The annexed description of Fanny Wither spoon, the mare that won the 2:19 race at Chicago on the 14th, is from the Breder's Gazette.

sette. When Mr. Hickok left here last spring for the East he prophesied that Fanny was one of the coming great trotters, and was of the opinion that she would distinguish herself this season.

Fanny Wither spoon, the bright and shining light of the Midway stable, is a large chestnut mare, sixteen hands one inch, weighing likely about 1,050 pounds in her present condition. She has a thin line of white down the face that is so fine as not to be continuous. Her near hind leg is white almost to the hock. She has rather a plain head, with a tendency to Roman nose, a long, slim ear and clever eye, a straight neck of medium length, deep shoulders, rather flat, and angular in the middle piece, ragged ribs, remarkably clean flat limbs and splendid feet. She is said to have trotted eleven races as a two-year-old, yet I doubt if there is a sounder trotter living. She wears skin boots, scalpings, rolls, and quarter boots, 13-ounce shoe forward, 8-ounce behind, a large snaffle covered with leather, and a curved cheek bit, worked by an overdraw resembling Carlton's. Every body knows she is Almon's daughter, and since she can trot very fast and stay, Messrs. Simpson, et al., will never cease to remind us that her dam was of running blood, so far as known. She is a rough-gaited mare, except when at top-speed, and reminds me of Proteus. Those in the secrets of the stable say she can give any trotter a race.

Wise's Axle Grease wears longer than any other, because it does not gum.

## SUNDRIES.

Character is higher than intellect.

Our to-days and yesterdays are the blocks with which we build.

Fits, Fits, Fits, successfully treated by World's Dispensary Medical Association. Address, with stamp for pamphlet, Buffalo, N. Y.

Those who set up a standard must expect to be judged by that standard.

For four years I suffered agony from a skin disease. Dr. Benson's Skin Cure cured me." C. B. McDonald, Plantersville, Ala. \$1. at druggists.

Truth alone smells sweet forever; and illusions, however innocent, are as deadly as the canker-worm.

If good seed be sown, though it be borne off by the four winds, some grain will fall on the mellow ground and show the flower.

A pint of the finest ink for families or schools can be made from a ten-cent package of Diamond Dye. They color Silk, Wood or Cotton.

By far the best experience of men is made up of their remembered failures in dealing with others in the affairs of life.—Smiles.

Conrad Oberle, St. Louis, Mo., says: "I have taken Brown's Iron Bitters for general debility and have been benefited."

A reasonable faith is the lever which moves the world; it surmounts all obstacles and ascends the hill of difficulty.

The first real skin cure ever discovered was Dr. Benson's Skin Cure. It cures all rough and scaly skin diseases and makes the skin smooth and healthy. It is an ornament to any lady's toilet.

The true grandeur of humanity is in moral elevation, sustained, enlightened, and decorated by the intellect of man.—Sumner.

For the Children.—Let the children take Simmons Liver Regulator and keep well. It is purely vegetable, and safe to take either alone or in connection with other medicine. Mild in action and pleasant to take.

Cherish love in the household as you would cherish life; it is its life and glory, and the wealth of the Indies cannot atone for its loss.

Cancers and other tumors are treated with unusual success by World's Dispensary Medical Association, Buffalo, N. Y. Send stamp for pamphlet.

Restraint in the expression of unpleasant feelings or harsh thoughts is the foundation stone on which many a happy home and many a dear friendship are built.

For its soothing and grateful influence on the scalp, and for the removal and prevention of dandruff, Ayer's Hair Vigor has no equal. It restores faded or gray hair to its original dark color, stimulates the growth of the hair, and gives it a beautiful, soft, glossy and silken appearance.

In blessing we are blest, In labor we find rest; If we bend not to the world's work, heart and hand and brain, We have lived our life in vain.—Caroline Seymour.

50 Fits in 24 Hours.—"I employed some of the best physicians here," wrote Wm. E. Tanner, of Dayton, Ohio. "They all said my child could not live for 3 weeks. It had 50 fits in 24 hours. We gave it Samaritan Nerve and the medicine effected a permanent cure." Druggists.

Truth, being founded on a rock, you may boldly dig to see its foundation, without fear of destroying its edifice; but falsehood, being laid on the sand, if you examine its foundations you cause it to fall.

Proof Everywhere.—If any invalid or sick person has the least doubt of the power and efficacy of Hop Bitters to cure them, they can find cases exactly like their own, in their own neighborhood, with proof positive that they can be easily and permanently cured at a trifling cost—or ask your druggist or physician.

Hop Bitters Co.—Sirs—I was given up by the doctors to die of scrofula consumption. Two bottles of your Bitters cured me. Leroy Brewer, Greenwich, Feb. 11, 1880.

The mind is like the body in its habits—exercise can strengthen, as neglect and indolence can weaken it—they are both improved by discipline, and both ruined by neglect.

FLIES AND BUGS.—Flies, roaches, ants, bed-bugs, rats, mice, gophers, chipmunks, cleared out by "Rough on Rats," 15c.

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HEALTHY, HARDY, VIGOROUS, PRODUCTIVE, EASY. Hangs on the vines for months and never drops, cracks or shrivels. Bunches large, compact, uniform, beautiful and showy. A good keeper, of excellent quality, and pronounced by experienced manufacturers unsurpassed as a wine grape. We court the fullest investigation, and invite all to come and see it.

Put out on terms of special advantage to the vineyardist. Send for circular. NIAGARA GRAPE CO., Lockport, N. Y.

JOHN B. BLYHOLDER, Horse and Farrier, Road and Hack work a specialty. 2717 Franklin Ave.

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JAMES W. JUDY, Tallula, Menard county, Ill., live stock auctioneer. Sales made in all parts of the country. Reiers to any breeder in the west.

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J. W. BLANKFORD, Bonaparte, Iowa, Breeder and Shipper of Pure, Recorded Poland China Swine of best strains. Correspondence invited. Prices reasonable. Satisfaction guaranteed.

J. BAKER SAPP, Columbia, Mo., breeds pure English Berkshire Swine of the best quality. Imported stock at head of herd. Catalogue and price list free.

JERSEY RED HOGS and Spanish and American Merino Sheep, bred and for sale by J. N. Rozelle, Breckenridge Mo.

HERFORD AND ABERDEEN - ANGUS CATTLE—Gudgell & Simpson, importers and breeders, Independence, Mo. An inspection of their herds is invited.

SHORTHORN CATTLE.—J. F. Finley, Breckenridge, Mo., breeder of Short Horn Cattle and Berkshire Swine. Imported Kirkcubright Lad at head of herd. Stock for sale at all times.

KANSAS SHORTHORN CATTLE—Robert Patton, M. D., Hamilton, Kansas, breeder of Short Horn Cattle of the best families. Stock for sale. Inspection invited.

JAMES H. PARKER, Columbia, Mo., breeder of Short Horn Cattle, Southdown and Cotswold sheep. Grand Duke of Sharon 2739 at head of herd. Prices reasonable.

ANGUS AND GALLOWAY CATTLE—W. H. Leonard, M. D., Leonard, Mo., breeder of Angus and Galloway cattle and native Jacks.

D. W. MCQUITY, breeder of Merino sheep, Berkshire swine and high class Poultry, Rocheport, Mo. Has 400 rams ready for the service.

CHARLES E. LEONARD, proprietor Ram and York herd of Short Horn Cattle, imported Spanish Jacks and Jennets and Merino Sheep, Bell Air, Cooper Co., Mo., or Princeton, Mo. P. R. R.

HIGH CLASS BATES CATTLE, bred and for sale by M. W. Anderson, Independence, Mo. Grays, Harringtons, Harls, Places Accounts, etc. Kirkcubright Duke 22380 at head of herd.

W. H. & THOS. C. EVANS, Sedalia, Mo., breeders of Short-Horn cattle, Berkshire Hogs, Bronze Turkeys, Plymouth Rock Chickens and Pekin Ducks.

R. W. GENTRY, Sedalia, Mo., breeds and deals in Thoroughbred Merino Sheep of largest size and best quality. Rams and ewes always for sale at prices as low as the lowest.

T. C. LIPPITT, Shenandoah, Iowa, breeder of and dealer in American Merino sheep. Size, constitution and amount of cleaned wool a specialty. Stock rams for sale.

WILL E. KING, Peabody, Marshall, Saline Co., Mo., breeder of Short-horn cattle and Cotswold sheep. Grand Airline 8631, S. H. R. a Rock Rose of Sharon at head of herd. Good stock for sale.

L. PALMER, Sturgeon, Boone County, Mo., breeder of Short-horn cattle. Stock for sale. Fifth Duke of Aeklen (Rose of Sharon) and Commander (pure) Booth at head of herd.

SAMUEL JEWETT, Independence, Mo., importer and breeder of registered American Merino sheep. Satisfaction guaranteed to purchasers.

MERINO SHEEP—H. V. Pagsley, Plattsmouth, Nebraska, Mo., breeder of registered Merino sheep of the very best strains. Prices reasonable and satisfaction guaranteed.

C. P. PEW, Fairview, Pike county, Mo., importer and breeder of Cotswold and Shropshire sheep. Ewes and rams of all ages for sale. Correspondence solicited.

P. S. ALEXANDER, Lone Jack, Mo., importer and breeder of Cotswold sheep. Satisfaction on guaranteed. Call or write.

R. T. MCCULLY & BRO., Lees Summit, Mo., breeders and importers of thoroughbred Merino sheep of the very best strains. Prices reasonable and satisfaction guaranteed.

J. BELL & SON, Summerville, Texas county, Mo., breeders of pure Spanish Merino sheep. Choice ewes and rams at wholesale and retail.

G. B. BOWWELL, Breckenridge, Caldwell county, Mo., breeder of Merino sheep. 7,000 selected from. Call or write. Prices reasonable.

JOS. E. MILLER, Elmwood Stock Farm, Belleville, Ill., breeder of Holstein cattle, Shropshire sheep and Yorkshire swine.

CHAS. F. MILLS, Springfield, Ills., importer and breeder of Clydesdale horses, Jersey cattle, Cotswold sheep and Berkshire swine. Pure of blood and reasonable prices guaranteed.

CHESTER WHITE HOGS, H. W. Tonkins, Fenton, St. Louis county, Mo., breeder of improved Chester White pigs. Stock for sale at reasonable prices. Ship from St. Louis.

DE. H. B. BUTTS, Louisiana, Pike county, Mo., breeder of Jersey cattle. Fifty head to select from. Send for catalogue. Also Bremen geese and Plymouth Rock fowls.

DE. ABRAHAM NEFF, Arrow Rock, Saline county, Mo., breeder of Short-horn cattle. Oranthe Duke at head of herd. Correspondence solicited.

CHESNAULT TODD, Fayette, Mo., Breeder of Short-Horn Cattle, Cotswold Sheep, Sharon Geneva 10497 at the head of herd. Young bulls for sale.

H. V. P. BLOCK, Aberdeen Farm, Pike Co., Mo., breeder of pure and high-bred Friesian by imported Napoleon Bonaparte and Bismarck, Champion Alford Trotters, pure Jerseys, grade Jerseys (milk cows), white Yorkshire and Berkshire pigs. Send for catalogue. Address Fairview or Louisiana, Mo.

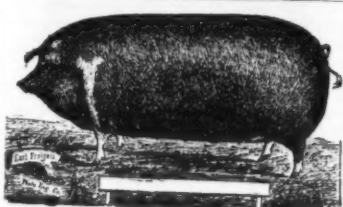
SETH WARD & SON, Westport, Mo., breeders of the best families—Aldrie Duchesses, Fletchers, Harringtons, Kirkcubrightons, Wild Eye-Road Duchesses, Hudson Duchesses, Constances, Minas, Hilpas, Darlingsons, Criggs, Rose of Sharon, Vellums, Mazurkas, Miss Wilkes, Harringtons, Young Marys. Oxford of Vinwood 3d, 33427, at head of herd. Young stock for sale.

W. ASHBY, Locust Grove Herd, Calhoun, L. Mo., breeder of Berkshire swine of the largest and best quality. Stock for sale. Correspondence solicited.

HERMAN ROESCH, St. Louis, Mo., Bird Fancier and Pet stock breeder, will buy, sell and exchange High-class Poultry, Pigeons and pet stock. Has for sale: Dogs, Rabbits, Guinea-pigs, Ferrets, Maltese cats, Canaries, Redbirds, Mocking-birds. Eggs for hatching from 20 varieties of land and water fowls. Send stamp for price list.

PURE BRED YORKSHIRE PIGS. Crossed Yorkshire and Berkshire, and crossed Yorkshire and Chester (the best cross) for sale. Send for prices. J. H. PARSONS, Oxford of Vinwood 3d, 33427, at head of herd. Young stock for sale.

RUSSELL & AKERS, (Successors to H. H. Russell) Warrensburg, Mo., breeders of thoroughbred Poland China Swine. Herd all recorded in A. P. C. Record. Stock warranted represented. Special rates by express. Correspondence solicited.



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GREAT SALE OF Short Horn Cattle AT DEXTER PARK, CHICAGO, ILL., On Thursday, Aug. 16, 1883.

Me srs. Pickrell, Thomas & Smith, Harrisburg, Ill.

Authorize me to sell about 65 splendid individuals of such families as Rose of Sharon, Young Mary, Young Phyllis, Pearllette, Cambric, etc., etc. For catalogue or any particulars address as above.

COL. J. W. JUDY, Auctioneer.

JERSEY CATTLE. I have one of the largest herds in the country composed of the choicest and most prizeable strains, all registered in the A. P. C. Herd Register. Young bulls cheap. York-shire pigs. R. R. FOSTER, St. Louis, Mo.

It will cost only a cent. M. L. K. M. E. N. BUTCHERS AND GROCERS—Send your address on a postal card and receive information, solid facts and proofs, which will show you how you can save a great deal of money every day, every week and every year, in your business. This is worth looking into. HUNSTON FOOD PRESERVING CO., 72 Kilby Street, Boston, Mass.

CHAMPION BALING PRESSES. A Ton per Hour. Run by 2 men and one team. Loads 10 to 15 tons in car. Send for descriptive circular with prices, to GEO. C. 216, 218 & 220 Main St., Quincy, Ill.

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Perpetual Hay and Straw Press. The best in America. Awarded first prize at N. Y. State Fairs in 1880, '81 and '82 over 100 competitors. Simplest and strongest. Puts 10 tons in car. Manufactured by WHITMAN AGRICULTURAL CO., St. Louis, Mo.

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ECONOMY. FARMER'S FRIEND. ETEL'S HAY PRESSES.

Are the cheapest; will bale hay at less cost than any other, and will save in railroad car than any other; no war-ranted or no sale. Send for illustrated circular.

GEO. ETEL & CO Quincy, Ill.

N. B.—Mr. Dedrick, your challenge against the Economy I did accept and offered \$50 to the winner; it is still pending. Please explain. G. E.

DEDRICK'S HAY & COTTON PRESSES, are sent anywhere on trial to operate against all other Presses, the customer paying the freight, the one that wins gets the Press, no one has ever won up any other Press, as Dedrick's Press is known to be beyond competition, and will save with twice the rapidity of any other. The daily superior machines can be sold to the dealer, the experienced by the dealer, and the dealer by the dealer. Working any other Press against Dedrick's, and always sells the purchaser a Dedrick Press, and all know it too well to show up. Address for circular and location of Western and Southern stores and Agents.

E. DEDEZICK & CO., Albany, N. Y.

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MURPHY WAGON Established 1825.

HERMAN ROESCH, St. Louis, Mo., Bird Fancier and Pet stock breeder, will buy, sell and exchange High-class Poultry, Pigeons and pet stock. Has for sale: Dogs, Rabbits, Guinea-pigs, Ferrets, Maltese cats, Canaries, Redbirds, Mocking-birds. Eggs for hatching from 20 varieties of land and water fowls. Send stamp for price list.

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Me srs. Pickrell, Thomas & Smith, Harrisburg, Ill.



### After Graduation What?

I am sure, young ladies, that you do not believe in such teachings; that your hearts, your consciences and your judgments dissent and revolt from them, and that you will leave these halls to become, rather, collaborators with the bright and hopeful vanguard of Christ's examp (the optimists by their faith in man's continued improvement) to establish the practice, as well as the belief, of the beautitudes by Him declared upon the Mount. For intelligent and successful work in this noble mission it seems wise that you soon adopt for your future programme. This should be, I submit, such as shall be suggested by one's personal situation, means, plans and gifts relative to things outside of the natural duties of youth. These latter are entitled to and should even have the priority. The duties of home, parental and created, are transcendent. They are founded upon our best instincts, our most precious feelings, our noblest passions and our most exalted sentiments. Upon their due regard and performance depends the happiness of the family, the character of society and of our social life and the stability and improvement of our government itself. Of these duties, affection and reverence for parents, industry and motherly love, devotion to study and ambitious zeal in practically acquiring the rare knowledge and grand fine art of household affairs, and kindling the culinary fire up through all grades of cookery, from the humble braise and bacon up to the artistic angel-

Let us briefly consider some of these questions. I leave the supreme question of a national emergency where Washington left it. Among the questions outside of that that are entitled to your consideration, both practical and speculative, during all your future years and which your educations here acquired under the wise instruction, the considerate supervision and noble example of your most worthy preceptors, have qualified you to discuss and decide are those that shall influence and shape the forms and fashions of social intercourse that shall characterize and mould public opinions and sentiments relative to the fittest relations between the sexes, and that shall cause the legislation of the state to recognize and secure them for their happiest realizations. What shall be the form and fashions of social intercourse may be made to depend upon the sanctions of sensible and cultivated women. They will for their purposes specially appreciate and favor such individual qualities as personal integrity and sound character, and an exalting taste and intelligent and pleasing conversations. Where these prevail social intercourse cannot be vicious; will be patient in forming opinions of others in order to be just; will be improving in manners, sensible and tasteful in apparel, that companionship may be agreeable and the pleasing eye be gratified; will in conversation be instructive without offensive pedantry or unbecoming familiarity, and be genial with the commonplace, and the humor which the occasion and the present events and surroundings may suggest. These forces women can create and render dominant by manifesting for them a constant and earnest preference, approval and satisfaction, and for the lack of them as constant and earnest a repugnance, dislike and dissatisfaction. In this field, young ladies, you have an elevated and a culturing mission, one on which you can exert a powerful influence.

and in such radical, delicate, and vital changes legislation should go no faster. When it does its enforcement is baffled the proper effect of law is weakened and the government is disgraced. Government becomes so enfeebled as to require that the worst of all remedies, physical force and fear instead of respect and loyalty for its lawful administration. Such has been the revolution already wrought during the last thirty years in social sentiments and public opinions, followed up by favorable legislation, relative to the rights of married women to their earnings, their property and that acquired by the family during the marriage, and to the care and education of children in the sad cases of separation and relative to justifying causes for separation, that, so far as all these essential matters of the family institution are involved the needs of legislation seem to be now rather in the direction of their more politic and philosophic adjustment as indicated by experience under the operations of this legislation. To your habits of reading, study and reflection acquired in this institution, you should be entitled to the credit, that of observing the current information of the social and political movements of your country, in order that you may so comprehend them that your influence as your opportunities shall allow may be intelligently exerted towards perfecting this class of legislation, that so nearly and dearly can affect the comfort, happiness and true relations of your sex to the rest of your fellow-citizens. Among the instructive and enlightening means for the success of this endeavor I take the liberty to suggest the following:—the sources of education and enlightenment, culture and appropriate information, you keep ever at hand, and with familiar study and perusal, the Bible, Shakespeare, some reliable encyclopedia, a standard monthly magazine, a metropolitan newspaper, and a newspaper especially published in and for the region of your

rejuvenate their whole system. No other preparation so well meets this want. It

**\$72 A WEEK, 218** a day at home easily made. Costly outfit free. Address **FAIR & CO., Augusta, Me.**

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price. 50c  
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**Agents, male and female, for new  
Daughters of America." Low in  
cents will secure an outfit & agency.  
FORSHEE & McMAKIN, Cincinnati, O.**

Since the milk separator has appeared in Philadelphia has naturally many who are opposed to the best it is working suits. We have from a pro Pa., who in reply says: "I will forge, make every Supper months, I am very satisfied with a capacity of thousands and run it by one of 1,900 or 1,000 comes new of setting up have even responded to it has taken of milk whereas less than as we have acid, as does There grain of is certainly the old way The milk cause the soon after machine. evidently gain and comfort With our pastures, ter, and the no difficulty and of even the skim-sweet, and can be left would do The man is easily made of wear a Perhaps inquiry, I pleased to

The N. fact that it off in the from the 15 months butter and the cow exclusively the starting systems that deal for consular English n reception t a large tra the great its way to districts of numbers, year ending pounds. K there were seventy-fl for the sum 112,000,00 following exports for New York

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Mr. Jas milked an the milk a In addition which kept old and he work.



## The Dairy.

### The Centrifugal Process.

Since the Danish-Weston centrifugal milk separator advertisement of the Philadelphia Creamery Supply Company has appeared in the RURAL WORLD, it has naturally excited the curiosity of many who had not heard of it before, as to the benefit to be derived from it, how it is worked and what are the known results. We therefore present the following from a practical dairymen of Chester Co., Pa., who has given it a fair trial:

In reply to your esteemed favor of late date, I will say I have been using centrifuge, made by the Philadelphia Creamery Supply Company, for the last four months, and that its use has been entirely satisfactory so far. This machine has a capacity, as we use it, of about one thousand pounds of milk per hour. We run it by water-power, giving it a speed of 1,000 or 2,000 revolutions per minute. I aim to take out all the cream, and it comes nearer doing that than any plan of setting milk for cream raising that I have ever tried. I find that in the corresponding months of the last three years, it has taken, on an average, nearly 29 lbs. of milk to make a pound of butter, whereas with this machine it has taken less than 25 lbs.

We have complete control of the cream, as we can churn it sweet, or slightly acid, as desired.

There is no injury to the grain of butter, and in other respects it is certainly better than when made in the old way.

The milk and cream run less risk from taints, or atmospheric influences, because the separation is accomplished as soon after milking as it can be got to the machine. Even impurities that may accidentally get in the milk, are thoroughly and completely taken out.

With our Chester County green-grass pastures, our living streams of pure water, and this machine, there ought to be no difficulty in making a very fine butter, and of even quality. As I make butter only, I cannot speak of the suitability of the skim-milk for cheese, but as it is sweet, and desired proportions of cream can be left in it, I cannot see but that it would do very well for the purpose.

The machine is simple in construction, is easily managed, and I see no evidence of wear about it.

Perhaps this covers the ground of your inquiry, but if more is needed, I will be pleased to amplify any point desired.

Very truly yours,

JOHN I. CARTER.

### Exports and Why.

The N. Y. Tribune call attention to the fact that there has been a decided falling off in the exports of butter and cheese from the United States within the last 13 or 15 months. Prior to 1880 most of the butter and cheese made in this country was the product of individual farmers, and the consumption was confined almost exclusively to the home market; but with the starting of the factory and creamery systems the production became so great that dealers were compelled to look abroad for consumers. A few ventures in the English market met with such warm reception that there immediately sprang up a large trade with that country. Soon the great mass of American cheese found its way to England and the cheese-eating districts of Continental Europe. In round numbers, the exports of butter for the year ending May 1, 1880, were 32,000,000 pounds. For the year ending May 1, 1883, there were nine million pounds, nearly seventy-five per cent. less. In cheese for the same dates the exports fell from 112,000,000 to 86,000,000 pounds. The following tabulated statement shows the exports for recent years from the port of New York:

	Pounds.
May 1, 1879, to May 1, 1880...	32,138,473
May 1, 1880, to May 1, 1881...	27,711,975
May 1, 1881, to May 1, 1882...	15,142,591
May 1, 1882, to May 1, 1883...	9,753,572

### CHEESE.

	Pounds.
May 1, 1879, to May 1, 1880...	112,483,247
May 1, 1880, to May 1, 1881...	132,739,634
May 1, 1881, to May 1, 1882...	122,267,746
May 1, 1882, to May 1, 1883...	86,288,082

Benjamin Uner, who compiled statistics for the New York Merchandise Exchange, in accounting for this marked falling off, said that for the last ten years England and the dairy districts generally of the Continent had suffered from bad crops. They were unable to supply the home demand, and the poverty of the people compelled them to substitute on their own tables cheap cheese for high-priced meat.

### Butter and Cheese Figures.

As to the amount of butter and cheese made in the country, the census of 1879 gives the following figures:

Butter made on the farm, 777,250,287 pounds; made in factories, 294,491,784 pounds; cheese made on the farm, 27,782,480 pounds; made in factories, 215,885,361 pounds, of which 171,750,495 pounds was made in the factories devoted exclusively to cheese making. According to the census of 1870 the total butter product was 514,092,683 pounds, almost all made on the farm, the total cheese product 162,927,382 pounds, of which 33 per cent. only was made in factories, over four times as much cheese being then made on the farm as now. It is apparent, from these figures, that the dairy business is fast being transferred from the farm to the factory, to the increased profit of the farmer and the great relief of the farmer's wife.

In conjunction with the growth of the butter and cheese products it is important to notice the increase in the number of milk cows, which, in 1880, numbered 6,385,094, and in 1880, 12,443,120, and for this increase in the source of raw material of less than 100 per cent. have an increase in the aggregate of manufactured products of more than 150 per cent. being considerably over that in butter, but less in cheese. In other words, the steady improvement in our dairy stock makes the milk cow of 1880 worth at least half as much again as her predecessor in 1850.—Michigan Farmer.

Mr. Jas. P. Merry, near Sturgeon, milked an average of five cows, and sold the milk and butter in one year for \$665. In addition to this he had the calves, which kept the cows. Mr. M. is 62 years old and he and his wife did their own work.

### Modern Dairy Farming.

According to the Hon. Hiram Smith, of Wisconsin, modern dairy farming starts out with keeping one cow on four acres, and this should be the password to every dairy lodge—"one cow to four acres;" and this should be rapidly reduced until the undoubted possibility is reached of keeping one to every acre. One of the principles of modern dairy farming is to have our cows give the most milk when dairy goods are at the highest price, which is invariably in winter. It has been repeatedly demonstrated that a good herd of cows coming into milk in September, October and November, will, in the average, give from 4,500 to 6,000 pounds of milk annually. This milk is worth, to sell at a factory, or to manufacture into butter or cheese, \$1.30 per 100 pounds, or \$58.50 as the average for each cow. In other words, dairy farming with one cow to eight acres on 100 acres produces \$1,160; modern dairy farming with one cow to four acres produces \$2,600, an increase of \$1,500; by an outlay for feed and help, a net profit of \$60—a sum sufficient to raise the price of land from \$50 to \$100 per acre. A fundamental condition of successful farming is large crops of corn, not less than two acres of fodder and four acres of field corn for every ten cows, or a total of twenty-four acres for forty cows. All the manure of the farm should be evenly placed on these twenty-four acres during the winter, and the land plowed previous to the tenth of May, and thoroughly harrowed, the corn planted immediately thereafter with a horse drill, the rows three and one-half feet apart, and the kernels from seven to nine inches apart, and cultivated well before the corn comes up with a fine-tooth harrow. Frequently thereafter cultivate until the tenth of July, at which time, if work has been honestly done, it will be free from weeds with never a hoe in the field, and it is almost certain to produce fifty bushels per acre of shelled corn and thirty tons of fodder. It takes less labor to raise twenty-four acres of corn as described above, than to raise half that amount planted in hills and the cultivation deferred until you can see the rows.

### Getting Rid of Flies.

Flies are just now worrying horses and cattle most persistently. "No animal that is exposed to them can thrive or do well. The owner hears them restlessly struggling with their tormentors all night long, and may be exasperated at their restlessness. He does not know that the tired beasts are tormented by a vicious, biting fly, which gives the horse no rest. This fly is supposed to be the harmless house fly, and one wonders how they learn to bite so sharply as they do one's ankles while one is walking. This fly is a true blood-sucker, with a sharp, lancet-pointed proboscis. Its name is *Stomoxys calcitrans*, and it is so called because it causes the horses to kick so violently. It is almost exactly like a house fly excepting in its biting organs, for a house fly, called *Musca domestica*, is a sucker, or rather it laps its food with its tongue, formed like a comb or one side of a feather. The stable fly, on the contrary, is a most pestiferous enemy of horses and cattle, and its character should be known so that its attack may be averted. We have found cleanliness and pure air in the stables of great service. Wire gauze in the windows, which may be kept open all night is also very useful. But the best remedy is Persian insect powder, by which the stable may be wholly cleared at night, and then if the entrance of a fresh crowd is prevented the animals may sleep in peace. This powder is a fine yellow dust, made of the flowers of a species of pyrethrum, and when scattered through the air of a stable floats and spreads all through it, and kills every fly. In your dairy the last three summers this powder has been of great value, giving the cows a peaceful rest at night, and securing peace and comfort at milking time. Its cost will be repaid many times over in the better condition of the horses, and in the better quality and yield of the milk and butter. Its use in the kitchen will also be found of great service and comfort, especially if it is used at night to kill off the flies, and screens are used on the doors and windows during the day. And the farmer should not forget that he himself is worth considering as the most valuable of the live stock.—The Dairy.

### Cloth Turning Butter White.

The Dairy says: "The cause of print butter turning white by lying in a cloth (not laying—butter never lays), is said by an authority (?) to be the effect of the acids used in bleaching cloth; also that it may be avoided by the use of the thinnest make of muslin or cheese cloth." This explanation will be very unsatisfactory to the dairymen who is troubled with his print butter. Acids are not used in bleaching. The agent made use of in bleaching cloth is chlorine gas, in combination with lime, and the thinnest muslin is bleached in the same way as thicker goods. It is also necessary to remove all traces of the chlorine as soon as the goods are bleached, to save the fiber from being destroyed by the chlorine, which is remarkably corrosive in its effects. So that this explanation is none at all. But white goods are, like everything else, adulterated with paste and white wash, or terra alba, and the alkaline effect of the clay would cause butter to turn white, just as impure salt having lime in it, and consequently chloride of lime, would also do. If the cloths are washed and thoroughly rinsed from soap, and the salt used is pure, there will be no change in the butter which comes in contact with them."

The creamery at Macon, Mo., is making near 200 pounds of butter per day. They are running four teams. Those who wish to furnish cream can get cans and coolers by calling for them.

Creameries are being established in various towns all over the State, and there is good and sufficient evidence that they pay a handsome price for all who engage in the business. A farmer near Independence, Mo., received \$93.62 for cream from four cows for 100 days, and another \$81.55 from four cows for 93 days. The farmers in different sections where creameries have been established are delighted with the manner in which they pay, and in localities where there are no creameries the business is being talked up. There is no good reason why Palmyra should not have such an industry. It has been talked of for some time, but only needs a brisk forward movement to make it a reality.

## The Pig Pen.

### Hog Hygiene.

Readers of the RURAL WORLD have, perhaps, little idea to what an extent the hog resembles humanity, or the extent to which hygienic surroundings are as beneficial to the one as to the other. We do not mean, when speaking of resemblance, to refer to any oft-quoted proverb, such as "drunk as a pig," "gluttonous as a hog," &c., &c., but to those organs which are said to more particularly control the temper and determine the health of both, the stomach and the liver.

One writer on his hogship, and for a year or two past a resident of Missouri, pronounces the hog not only a filthy animal, but one who thrives, nay, luxuriates in filth; and stands prepared to call any man a fool who dares question his *ipse dixit*. At least, he has done so, and what a man has once done he may be safely credited with the ability of doing again. He may be right, too, and, for our present purpose, we are willing to admit that he is; but even then we submit again the similarity of the one to the other, for if he, or any one else, can point to a more filthy creature than man under certain highly civilized circumstances, we want to see it. Hence we have cholera, and other diseases that so nearly approximate it, as to warrant many in calling it by the same name in both, and doubtless produced by similar causes.

The following, from the fertile and generally philosophic pen of F. D. Curtis, is in point:

"I have remarked that corn is the purest kind of food, but where pigs are fed exclusively on that kind of diet it is equally true that it produces a feverish and unhealthy condition, and lays the foundation for bodily ailments, if it is not directly the cause of producing them. It will create inflammation of the bowels and disorders of the stomach, which may prevail so extensively in a herd as to be considered contagious, leading to the conclusion that hog cholera prevails. The digestive apparatus of a pig is nearest like that of a human being of any quadruped, and it is also subject to many of the same diseases, to-wit: rheumatism, quinsy, inflammation of the lungs and bowels, with stomach disorders. The human stomach and constitution will give way under a diet as stimulating and feverish as clear corn, especially if the system is kept in a gorged state for a considerable length of time. The hog will stand it longer, perhaps, but will as surely succumb in the end. It is a higher order of farming when sanitary laws are applied to the rearing and management of the farm animals. It is gratifying to know that under the leadership of the agricultural press there is a rapid advance being made in these respects. The best remedy for stomach and bowel disorders lies in preventive, rather than cure. Hogs should have the range of a clover field, or be fed liberally with sweet corn-stalks or the early maturing sorghum and roots in their season, with plenty of pure water. When this is done the injurious effects of eating a large quantity of corn will be obviated, and even young pigs will keep healthy. If this system would be more generally adopted in the West, there would be less of so-called cholera, and more lean meat in proportion to the fat, which would help to create an increased demand for pork."

This is not all the advantages to be derived. The peculiar oily flavor which somewhat characterizes pork made in the Western States would be lessened. It is undoubtedly a fact that the flavor of pork, as well as its consistency, is affected by the kind of food from which it is produced. Mast makes very oily and rank pork. It would also be conducive to the health of the younger pigs, and add to the profits of growing them, if they should be allowed to go into a separate inclosure where they could be fed wheat middlings or other lighter foods. There is no better food for young pigs, to supplement their mothers' milk, than oats; they may be fed whole. The least trouble attends this kind of feeding, which would be an important consideration with many. Everybody knows that cow milk is the best food for young pigs, next to their mothers', but with large breeders of hogs there is never enough of cows' milk to go around. The Western farmer is somewhat averse with his large areas to the painstaking care which is practiced and more necessary, perhaps, in the older States, but which he could follow with unquestionable benefit to his business."

### Carbolic Acid for Sick Pigs.

You ask me to relate to you an account of the treatment of my pigs that were sick some time ago.

I have ten sows, with sixty pigs, running in a field by themselves. In this field there is an old tenant house, in which I let the sows and pigs sleep. I have a board across one of the room doors, high enough from the floor to allow the pigs to pass under. In this room I feed them shelled corn by themselves. Some three weeks ago I was to leave home about noon, to be gone for a few days. On going to feed my pigs on the morning of this day, I noticed that several of them were purging very badly, and in looking at them for a short time I found four of them vomiting. I thought looked very much like hog-cholera.

I caught the ones that were vomiting and put them in a pen some distance from the others, got the remainder in their house and shut them up. I took about a half a teaspoonful of saturated carbolic acid, and mixed in a trough. I also gave the sows a pretty good dose of the same, in a bucket of slop. I left orders for the pigs not to be turned out while I was from home, but to keep them entirely away from water; the sows to be put with them over night, but to be turned out again in the morning. The four pigs in the pen, mentioned above, had the same treatment as the others as to medicine. I was very anxious to reach home from that trip to see how my pigs were doing, fearing all the time that I should find half of them dead. But to my surprise, on reaching home I found them all alive and hearty. We turned them in their grass field next morning, and so far I have not been able to see a sick pig among them. Now, I have no evidence that it was

hog disease or cholera that they had. I have never had that terrible pest among my hogs, but they were very sick pigs at any rate, and I treated them as above, and they got well; so you can rest assured that should my pigs show signs of indisposition again, I should use the same remedy with a good deal of confidence.—S. H. Ellis, in Farm and Fireside.

## The Poultry Yard.

### Clean the Hen-House.

At this season of the year many poultry breeders are considerably troubled with the insect vermin that haunt the houses, perches and nests of their feathered friends, and much of success or failure depends upon what is done, and its being done now and thoroughly to remedy it. A Duchess County correspondent of the Country Gentleman thus writes of them and the treatment necessary, and readers of the RURAL WORLD will do well to heed his suggestions now:

There are two distinct varieties, or rather two separate stages of existence, of the minute but troublesome mites that infest and inhabit the houses and roosts. At this time of year they are in full perfection, and multiply rapidly. There are also two distinct species of lice that live on the bodies of the fowls, remaining and increasing there. One inhabits the head, and the other lives on other portions of the body, and when at rest are found in clusters just above and below the vent. Fowls that are in good health and condition seldom carry many of these parasites, for if they could not rid themselves in some manner, they would soon be overrun. Nature implanted the instinct of wallowing in dry earth as the only means of getting rid of their harassing enemy.

The mites never remain on the bodies of the fowls, but feed on their blood at night. This, although weakening, does not appear materially to injure them until the moulting season comes on. Then they draw the strength from the fowls. This is the most delicate period in the whole existence of a fowl, which many never recover from. The appetite fails all at once, and at a time most requiring the stimulus of food. Valuable fowls need much care and nursing through this stage, and without it they either die or become worthless.

The two mites that live in the houses are a soft kind and a hard kind, and those that appear to have a shell and those that do not. The soft sort at this time of year may be found in large clusters on the under-side of the perches, and look like dark masses of blood. Crush them, and they are found to be filled with blood. In this state they are tender and easily destroyed. A thick coat of hot linseed oil will destroy them, while when advanced to the stage when they have shells, they are not quite so easily gotten rid of. When arrived at that stage, they swarm all over the house, and completely fill it, living on the droppings alone. They hibernate in the winter, and are ready to crawl out again when warm weather approaches.

There is no remedy so thorough as lime in these cases, and I use it slaked, either wet or dry. Wood ashes is good, but not so searching. Now is the season to destroy these mites, while they are in the soft state. It should be done before they scatter and fill the whole building. They are easy to come at now, for they are confined to the perches. A month or two later they will have spread all over, filling every crack and crevice in walls and in the floor. Thus they will live for years. Nothing will rout them but frequent strong doses of lime. When applying the lime, remove the perches from the building to some distance. Do the work thoroughly, and give a good coat on each end. Apply the lime to every place where there is any harbor for the nuisance.

### A Moveable Hen-Coop.

A correspondent who has had a varied experience with poultry writes as follows to the Cincinnati Gazette of a portable coop and the advantages of its use. He thinks it "the best plan he ever hit upon":

The scantling are clear yellow poplar dry, 11-2 by 2 inches. The coops are 12 feet long, 5 feet 6 inches wide at bottom, and 3 feet 3 inches at top; corner post 4 feet long. The rails are let in on the corner post one-half an inch to steady them, and three eight-penny fencing nails in each post. The door is in the center of the front end, extending to cross piece overhead. On this piece in the center nail a stout inch board fifteen inches above the top, or high enough to make the roof one-fourth pitch, so as to cut a plaster lath in the middle and make a covering. In the center of the back end allow your piece to extend from bottom to top, matching the one in front of your scantling, lengthwise, leaving a sharp corner rip. Then the two sides have the necessary slope. Slope the top side rail to match. Now cover three and one-half feet of the back with light shingles, the remainder with plasterer's lath, suitable distance apart.

Make a door or gate of lath, hang it, have a good strong latch. Put a good strong pin in the back, and two pointing together in the front corner posts. They must be moveable, so as not to interfere with the free use of the door. Hang a net on each side of the door. In the center of the covered part, crosswise, hang a good stout roosting pole on tarred twine. One cock and six hens live and fare sumptuously here. It matters not what breed. Two men will carry them anywhere. During the breeding season they are moved each evening. You can keep them close together, or you can take them to a distant field, where some of you pass each day, and set them to housekeeping, allow them free range. After they are in the coop one day and night you can let them out and in, only be careful that the door is shut and they be not disturbed at night. They will not desert their new homes. In this way those that are cooped pick up over half their living—this gives them employment, which is one of the secrets of egg production.

Perry Davis' Pain-Killer is an excellent regulator of the stomach and bowels, and should always be kept on hand, especially at this season of the year, when so many suffer from bowel complaints. There is nothing so quick to relieve in attacks of cholera.

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## The Stock Yards.

### Weekly Review of the Live Stock Market.

TUESDAY, August 7, 1883.

Receipts for 24 hours ending at 11 a.m. to-day:

Cattle 4,591, Hogs 3,436, Sheep 4,573.

CATTLE—A good big supply met buyers who seemed glad to operate, though why they should be was not discernible to the naked eye. All order points were well loaded down, and New York was away off and slow.

St. Louis, however, made a good record as sales will show below. Readers of the RURAL, however, may reasonably anticipate lower figures in the immediate future. Sol Kahn of Montrose, Mo., secured 6 1/2% for a fine drove; about 25 cents measures the decline after Friday. Representative sales:

29 native steers.....1225 56 12 1/2

44 Texas steers.....825 4 10

22 Texas steers.....824 4 10

22 Texas steers.....909 4 10

22 Indian steers.....905 3 15

22 Indian steers.....806 4 10

22 native steers.....1091 4 10

22 Indian steers.....908 4 10

22 Indian steers.....905 4 10

40 Indian steers.....980 4 10

40 Indian steers.....980 4 10

11 native cows.....926 4 10

57 native steers.....1217 5 00

76 native steers.....1174 5 00

39 native steers.....1027 4 50

48 native steers.....1287 5 50

20 southwest steers.....1025 4 15

22 southwest steers.....979 4 15

18 southwest steers.....8 3 38

16 native steers.....1223 5 25

HOGS—A good trade generally but enormous telegrams muddled things to some extent. The tone of trade was good, the movement brisk and values strong at \$4 90 to \$5 20 for mixed heavy; \$5 25 to \$5 60 for good butch hogs and \$5 45 to \$6 00 for good light hogs. It was about these latter that telegrams were indefinite, but all order points were given, and the feeling was strong at the figures. Values grew stronger till light hogs, good, sold for \$5 75. Representative sales:

92.....308.....\$5 00 57.....211.....\$5 50

67.....204.....\$5 50 14.....186.....\$5 50

33.....190.....\$5 85 36.....235.....\$5 60

22.....239.....\$5 25 30.....305.....\$5 50

117.....195.....\$5 60 52.....301.....\$5 60

54.....177.....\$5 60 58.....190.....\$5 60

44.....190.....\$5 60 61.....175.....\$5 60

61.....192.....\$5 50 10.....268.....\$5 70

41.....201.....\$5 50

SHEEP—Slower and easier though this market held up very well all week as compared with other points. Too many sheep came at last. Representative sales:

17 native lambs.....61 1/2 \$4 75

81 native sheep.....85 4 00

302 native sheep.....85 4 25

97 native sheep.....91 3 65

225 native sheep.....91 3 65

114 native sheep.....112 4 00

72 native sheep.....97 4 15

109 native sheep.....84 3 50

56 native sheep.....915 3 60

MONDAY, August 6, 1883. 2 p.m.

CATTLE—Receipts moderate. Nothing here suitable for export. All common to good cattle 10c to 20c lower than last Friday, and slow at the decline. Advices from New York and Chicago show very heavy runs and unsettled markets. Representative sales:

20 native cows.....1028 3 75

20 native cows.....852 3 60

15 native cows.....917 3 50

24 grass Indians.....783 4 35

43 grass Indians.....914 4 35

24 grass Indians.....940 4 35

21 native cows.....897 4 35

20 native cows.....929 4 00

21 native cows.....927 4 00

17 native cows.....927 3 75

20 native cows.....874 3 75

15 native cows.....874 3 75

16 native steers.....1280 5 00

42 native steers.....1109 5 12

52 native steers.....1109 5 12

21 native steers.....1109 5 12

25 native cows.....844 3 90

18 native cows.....915 3 60

HOGS—The market opened fairly active on all grades, and early sales were at about last week's closing prices, but on unfavorable advices from other points the market weakened 10c on all grades. Yorkers sold early at \$5 85 to \$5 95, and closed at \$5 75 to \$5 80. Fair to best heavy sold early at \$5 00 to \$5 50, and closed at \$5 to \$5 40. Coarse heavy ruled quiet from first to the close at \$4 60 to \$4 90. Market closed quiet. Representative sales:

20.....260.....\$5 30 40.....220.....\$5 80

15.....254.....\$5 20 46.....248.....\$5 45

28.....234.....\$5 10 26.....235.....\$5 40

69.....185.....\$5 90 71.....272.....\$5 45

18.....251.....\$5 30 29.....292.....\$5 20

16.....209.....\$5 10 20.....187.....\$5 10

82.....184.....\$5 90 21.....292.....\$5 20

SHEEP—Receipts light, and quality not the best. About all sold. Market lower than at the close of last week. Sales: 90 at 77 at \$3 15; 120 at 71 at \$3 25; 200 at 102 at \$3 35; 33 lambs at 58 at \$4 75.

FRIDAY, August 3, 1883. 2 p.m.

CATTLE—The market was active and strong on all grades. Supply of fat cattle failed to meet the demand. Ruling prices about 2c higher on fat cattle than they were at the close of previous week. Representative sales:

80 native steers.....1463 5 20

30 native steers.....1268 5 75

19 native steers.....1257 5 60

21 southwest steers.....872 4 30

24 grass Texans.....871 4 30

24 native cows.....817 3 50

29 Texas mixed.....734 3 60

22 grass Texans.....858 4 12

90 native steers.....1200 5 37

20 native steers.....1200 5 37

103 grass Texans.....960 3 90

19 grass Indians.....830 4 30

24 grass Indians.....890 4 40

84 grass Texans.....939 3 30

52 native steers.....1454 5 80

34 native steers.....1214 5 40

HOGS—The market opened fairly active on all grades, and a few sales were at a shade stronger prices but market soon weakened and ruled slow, Yorkers sold at \$5 85 to \$6 00. Philadelphia's \$5 35 to \$5 40. Smooth heavy packing \$5 00 to \$5 15. Coarse heavy \$4 60 to \$4 90. Medium weights \$5 20 to \$5 35. As compared to previous Friday—prices of light hogs are 25c lower, and heavy hogs are 65c to 75c lower.

Representative sales:

64.....217.....\$5 95 13.....270.....\$5 35

68.....174.....\$5 00 32.....272.....\$5 35

77.....281.....\$5 10 15.....175.....\$5 30

19.....198.....\$5 90 110.....197.....\$5 30

75.....196.....\$5 90 31.....198.....\$5 30

18.....259.....\$5 40 34.....208.....\$5 40

14.....183.....\$5 60 106.....192.....\$5 35

67.....181.....\$5 85 140.....309.....\$5 00

45.....229.....\$5 25 228.....228.....\$4 90

75.....107.....\$5 90 20.....187.....\$5 10

19.....323.....\$5 15 81.....257.....\$5 35

SHEEP—Market active. A good inquiry for fat sheep and lambs. Sales:

51.....106.....\$4 00 30.....95.....\$4 00

31.....91.....\$3 75 40.....88.....\$4 85

77.....92.....\$3 85 87.....108.....\$4 00

12.....112.....\$3 60 61.....79.....\$3 00

12.....88.....\$3 90 20.....187.....\$5 10

245 Texans av 65 at \$2 70; 39 lambs av 56 at \$4 50; 40 lambs av 60 at \$4 90.

GENERAL MARKET.

The week just closed has been one pregnant with financial matters, which have disturbed trade from one end of the country to the other. The effect of these financial troubles is apparent in the diminished values of clearing-house exchanges at leading centres. As a result stocks began to decline with great

rapidity. They continued to weaken until the very close. The Wabashes touched the lowest price they have sold at in four years. Western Union was very weak, and so were Missouri Pacific and the Gould stock generally. The decline was added by the announcement that a national bank in St. Albans had failed, and there were rumors of mercantile failures; that a large jobbing house in St. Louis was in trouble, and that a Boston bank was sure to go. It was, indeed, a bad day all around.

The regular Associated Press telegram says: Reports of additional troubles in the leather trade and the rumor of a strike by the telegraph operators on the railroads had an unfavorable effect upon share speculation. The Boston Commercial Bulletin of Saturday in its review of the wool market of that city says:

The general expectation in the West that prices would be marked up because of the recent large sales here, has not been fulfilled. A few things like Georgia and other medium wools are a little firmer; but values of most descriptions are unchanged, though there is a general feeling of confidence among holders and scarcely anybody is willing to make concessions below current rates. There has been a good call this week for medium and No. 1 wools, both washed and unwashed. Michigan No. 1 has sold at 28c; Georgia at 27c; 7/16; with 28c now asked; and choice medium Montana at 28c. A good deal of Montana and Texas wool has been sold this week. For choice Eastern Oregon 28c is also a quotation, and shippers advise that lots now on the way here from San Francisco will cost 27c laid down in Boston for wool shrinking 60 per cent. This would be equivalent to 67c scoured, and the wool cannot be sold therefore for less than 70c scoured, or 28c in the grease.

The Eastern Oregon wool is not as fine as that from Humboldt or Mendocino counties, but is stronger and healthier. The medium Montana wool at 28c is finer, softer and more desirable than Georgia, though the Georgia wools are running toward 1/2-blood to a greater extent than heretofore. The sales of fine territory wools have been at a wide range of prices, according to quality and condition. A very choice lot of fine Montana has sold at 27c but a million pounds of fine wool which will come from the southern part of that territory would not bring over 22c in Boston to-day. An average quotation for fine Montana and other territories is 25c. Sales of the fine Utah have been made all the way from 20c to 25c, the object being to get them up at 65c. Fine medium Utah at 25c to 27c is expected to cost 60c clean.

FLAX—Quotations unchanged, XX \$3 20; XXX \$3 60; Extra Fancy \$5 75.

WHEAT—Coming in but slowly, though speculation in futures was quite active. No. 2 red winter, cash \$1 04; No. 3, cash 98; No. 4, cash 91.

CORN—Receipts considered as for two days show no significant increase, nor was there anything in shipments for special note only so far as there is yet a shipping movement and none of consideration by rail. As with the case of wheat, the market value had no strength and was off on grades, and the grade market was dull at that, little doing in either. Futures had a dead dull market from scarcity of orders and the deals of the day were the smallest in amount from an unknown time. No. 2 mixed cash, 46 1/4; No. 2 white mixed, cash 47 1/4.

HAY—Unchanged. Choice new and old timothy in demand; common new dull. Fair demand for prairie. Sales: This side—2 cars prairie at \$8; 1 do \$8 25; 7 do choice \$8 50; 1 do \$8 75. E. side—1 car loose pressed new timothy \$8; 1 car old \$13 50; 1 do \$15. Also, 2 cars new timothy on E. side at \$11 50; 2 do old do this side at \$12 1/2.

HEMP—In demand; scarce. Undressed \$75 to \$100 per ton; dressed at 6 1/4 to 7 1/4; 5/8; 5/4; 5/8; hatched tow at \$75 00 per ton; break tow \$35 00.

OATS—were higher, cash and futures. Receipts the past week, dating from last Tuesday, have been small, as it is understood that farmers even with the large crop that is counted are not much disposed to ship in to market at present low prices—which are unprecedented in the year—and this is very probably the solution of the question of diminished receipts. The crop however, is surmised to be extraordinary prolific, and with a seeming determined downward tendency of higher staples, what can be expected from oats, which are of no export interest, while the consumptive interest can be so easily supplied. No. 2 cash 25.

BUTTER—Market quiet and steady. Demand only a light local one, and chiefly for the choice qualities. We quote: Creamery at 19 1/2c for choice to fancy, to 21c for selections; overheated or poor at dairy rates; dairy at 15 1/2c for choice to fancy; fair to good 10 1/2c; common 8 1/2c; country packed slow; choice 9 1/2c, common at 6 1/2c.

CHEESE—Quiet and steady. Round lots from first hands; 8 1/2c for full cream, and 4 1/2c for inferior—small way 14 1/2c higher, according to size of lot.

EGGS—Demand was brisk at 11c for good marks of current receipts and 12c candled. POULTRY—Quiet and unchanged. We quote: Spring chickens—Small \$1 01 to 1 10; fair to good \$1 75 to 2; choice to fancy large \$2 25 to 2 75; spring ducks \$2 25 to 2 50; old chickens—cocks \$3 00 to 3 25; mixed \$3 40 to 3 60; hens \$3 75 to 4.

GAME—Woodcock firm and in demand at \$5 and wood duck quiet at \$2 00 to \$2 50. POTATOES—In fair demand and steady. We quote: Consigned lots 25 to 30c; wagon receipts of home-grown 30 to 33c. Sales: 19 bbl Iowa (small) at 6 1/2c; the first received from that state.

ONIONS—Lower and dragging heavily; receipts larger, while buyers are practically out of market. We quote: Prime Iowa at 70 to 75c per bu. \$1 00 to 1 10; 75c per bu. Missouri and Illinois growth plentiful and hardest to sell, being poor keeping stock and generally damaged—ranged from 25c to 50c and 60c—latter for firm sound dry only. Sales: 15 cks Mo. at 30c, small lots do at 40 to 50c; 12 bbls Iowa yellow at \$1 60 per bbl. 1 do red at \$1 70, 60 choice do at \$1 80.

TOMATOES—Home grown in large receipt. Ripe sold from farmers' wagons at 35 to 40c per bu; green at 50c per bu box in shipping order.

SWEET POTATOES—New Bermuda (home-grown) sell at \$1 75 to 2 per bu loose, Southern yams at \$3 00 to 3 50 per bu.

CABBAGE—Selling in shipping order at \$1 per cwt.

CRAB APPLES—Dull at 40c 1/2 bu box. WATERMELONS—In liberal supply; quiet and easier. Jobbing sales at \$12 to 18 1/2 per 100 for Georgia, \$6 to 10 for common varieties. Car-lots quotable at \$100 to 140 per car on trk. Sale 1 car Mo. (Ga. variety) \$130.

CANTALOUPE—Choice stock ready sale and firm; sales \$1 25 to 2 50 per doz for common varieties, \$2 25 to 3 50 per doz for white Japan—one lot of 73 crates sold at \$2 25.

APPLES—Dull and lower; receipts being large, and including a much larger proportion of fruit unsuitable for shipping, namely,

small, sweet, stung, badly mixed, over-ripe, prematurely picked, etc., to the inferior quality of supplies rather than a lack of demand may be attributed the easier feeling, choice shipping and red varieties being in greatest request and best sustained in price. We quote: \$2 75 to \$3, fair \$2 50, inferior \$1 75 to \$2. Sales 500 bbls different varieties at \$2 25 to \$3—a few fancy brought \$3 15 to \$3 25.

PEACHES—Receipts light and quality of offerings not very desirable; choice large scarce and ready sale, but small to medium sized fruit slow. Prices unchanged. Southern Illinois stock sells at 25 to 30c 1/2 bu box for small and hard to fair, 60 to 75c for medium and 80 to 90c for the best; Texas chiefly at 90c to \$1, but fancy white Texas or China clings are worth \$1 25 to \$1 50.

CALIFORNIA FRUITS—We quote: Plums at \$2 50 to \$3; peaches at \$1 50 to \$2 box. DRIED FRUIT—New apples still declining; buyers out at over 8c. Other kinds of fruit in small offering and quiet. We quote: New apples—Fair 5 1/2c, prime 6c, sliced 8 1/2c; evaporated at 10 1/2c for No 1 to 8c for No 2; old apples 4 1/2 to 5c. Peaches—choice halves, new or old, 6 to 6 1/2c, inferior dark and wormy less. New blackberries nominal at 7c. Sales: 15 cks and 5 bbls and 25 cks new apples at 6c, 5 old do at 5c, small lot peaches at 6c; also 17 pkgs fancy new apples (large cut) at 6 1/2c.

FLAXSEED—Firm, with sales 1 car early at \$1 27 and 1 car later at \$1 28 1/2. August delivery had \$1 27 bid.

COTTON SEED—Salable at \$16 1/2 ton, Sept. delivery.

HEMP SEED—Quiet at \$1 25 to \$1 50; prime cleaned worth more.

CASTOR BEANS—Advancing, nominally \$1 40 1/2 bu for prime.

HONEY—Slow sale. Choice new quotable in lots at 7 1/2c for strained or extracted and 14 1/2c for comb. Jobbing sales of choice in fancy pkgs more. Old or inferior nominal.

BROOM CORN—Dead dull; nominal. We quote: Crooked, short, etc., 1 1/2 to 2c, prime 3 1/2 to 4c, long green hurl 5 to 7c.

PLUMS—Scarce, we quote: Wild goose 75 to 90c 1/2 bu box, chichasaw 50 to 75c; home-grown sell from \$1 50 to \$3 75 bu. according to kind.

PEARS—Few offering. We quote: Bartlett \$1 21 to 25 1/2 1/2 bu box, common varieties 50c to 75c; home-grown \$2 to \$2 50 1/2 bu loose for common sweet varieties.

GRAPES—Unchanged; poor stock dull. We quote: Hartford 60 to 75c 1/2 bu, seedling Concord 50 to 60c 1/2 bu, Delaware 12 to 15c.

BLACKBERRIES—In demand, but few on sale. Consigned lots quotable at \$1 to \$2 1/2 1/2 bu box, chichasaw 50 to 75c; home-grown 75 to 90c per gal measure.

WHITEBERRIES—In fair request at \$3 per 6-gal case for sound ripe.

Wise's Axle Grease beats castor oil.

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